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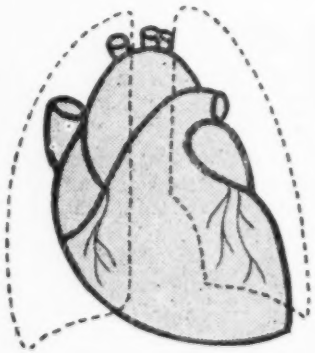

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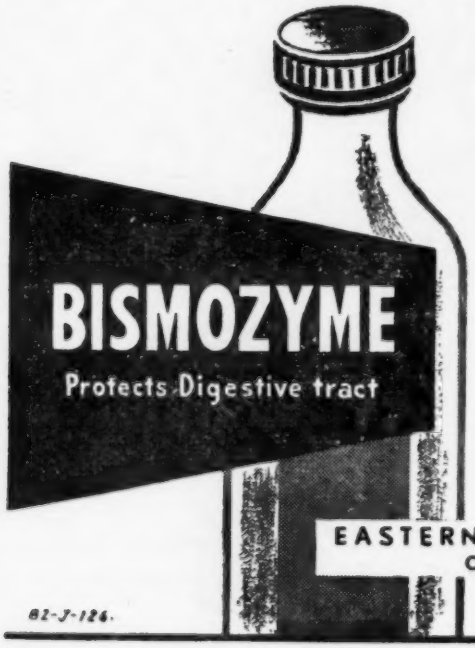

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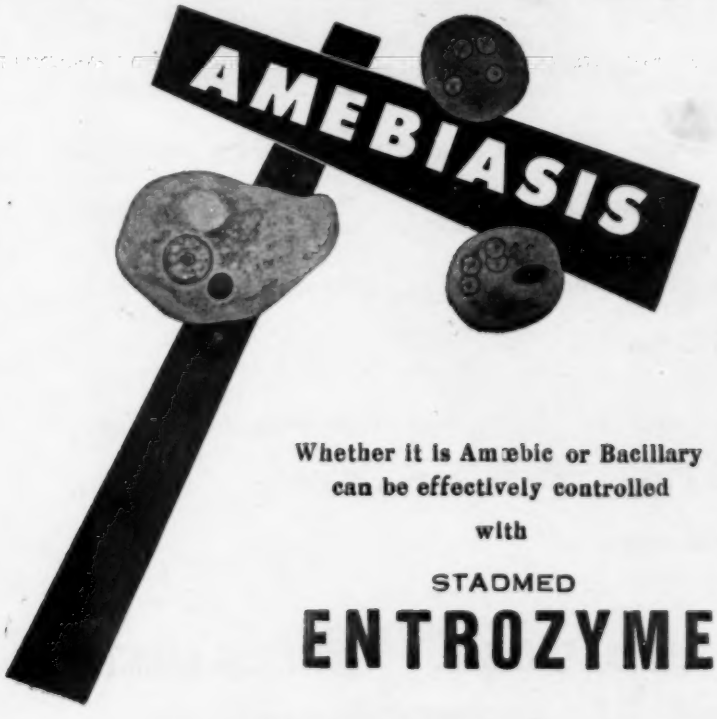

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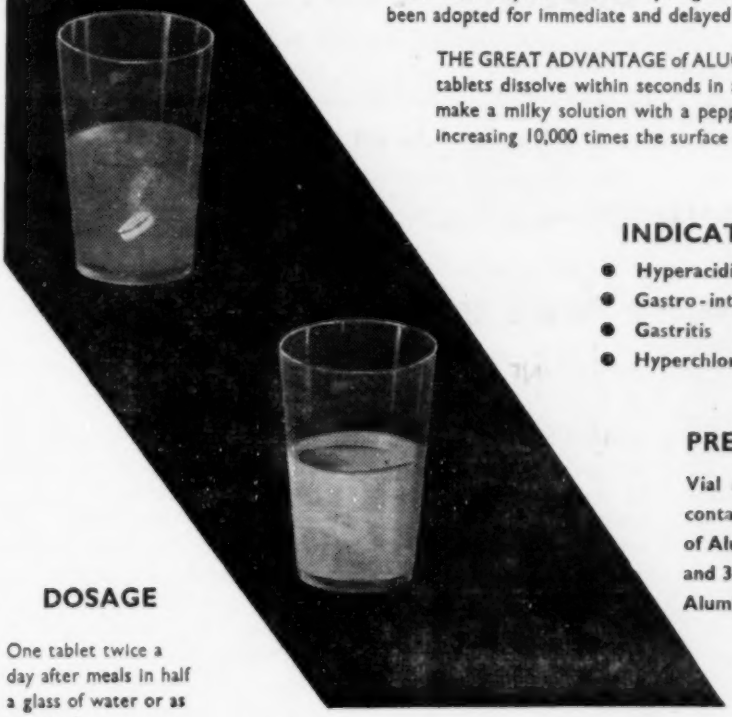

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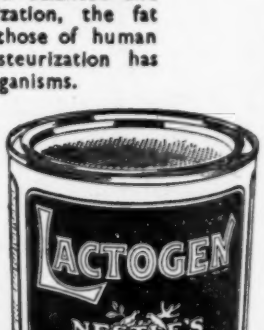

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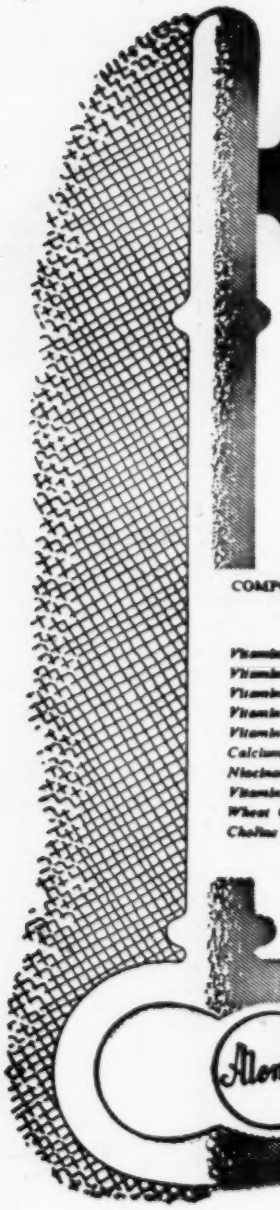

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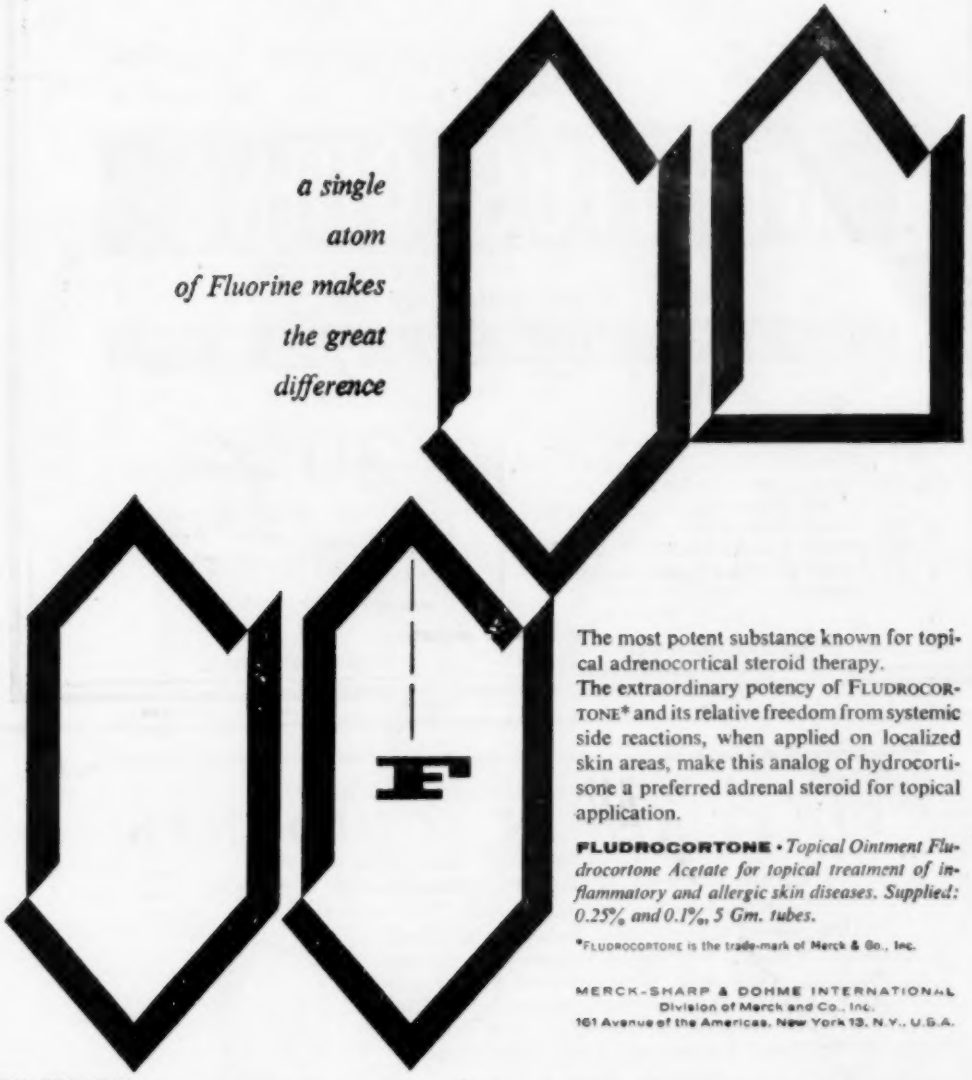

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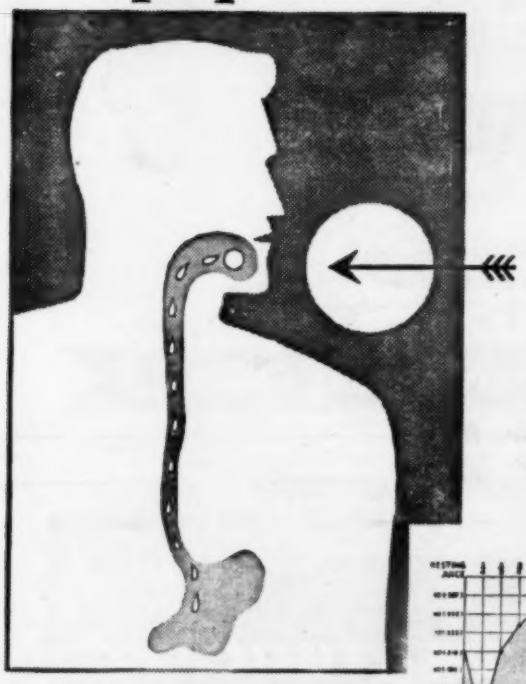

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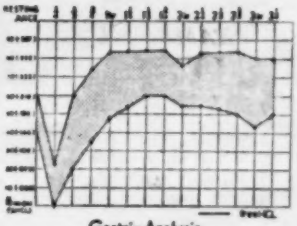
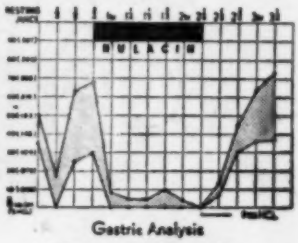


Gastric Analysis

Superimposed gruel fractional test-meal curves of five cases of duodenal ulcer.



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REFERENCES

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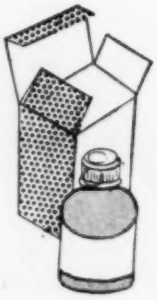

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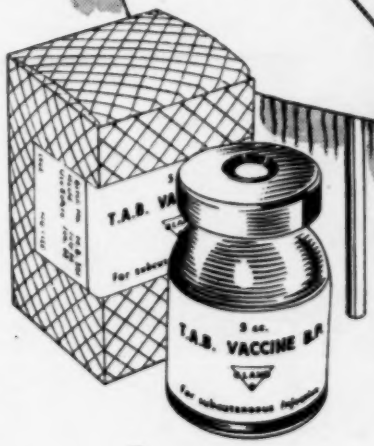

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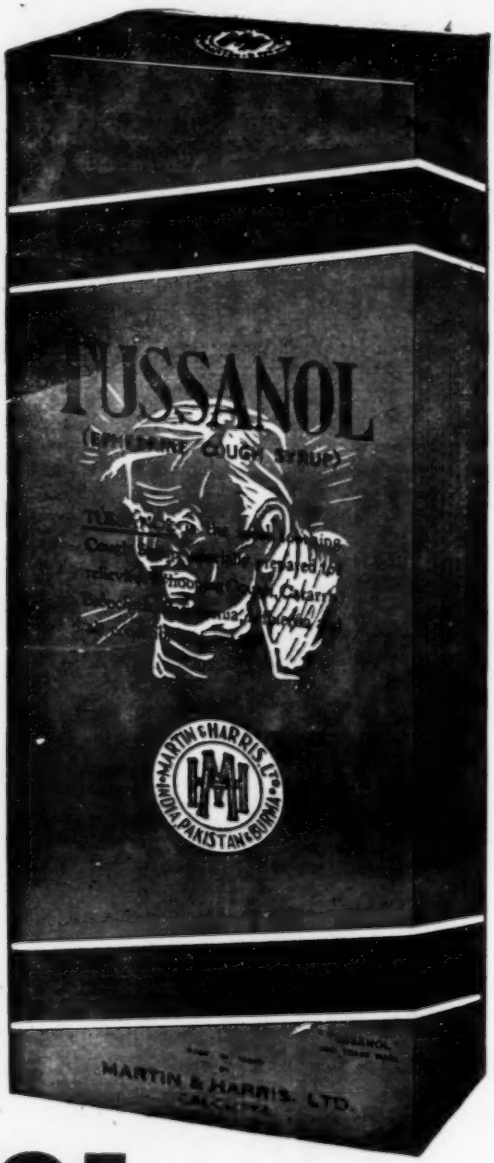

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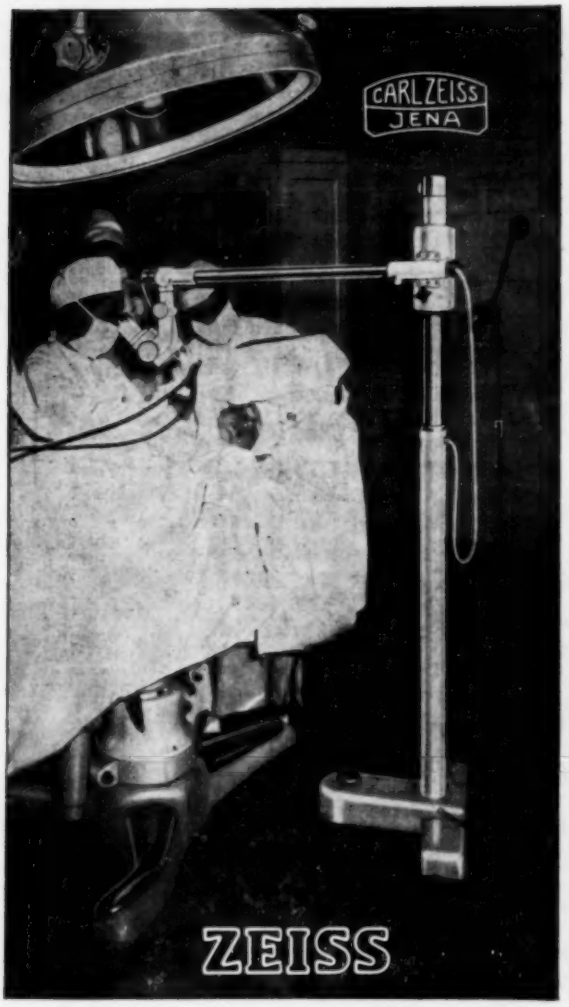

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ORIGINAL ARTICLES

SOME OBSERVATIONS ON KAHN'S UNIVERSAL SEROLOGIC REACTION

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The occurrence of nonspecific flocculation at low temperature in Kahn's test for syphilis is well known. Kahn (1951) noted that, if antigen diluted with varying concentration of sodium chloride was used with varying dilutions of serum and the system kept at 4°C for several hours, flocculation occurred with sera from normal persons and from persons suffering from various disease processes. He found that each normal individual gave a serologic reaction of a relatively constant pattern. Kahn explained these findings on the assumption that in the case of normal tissues, wear and tear lipids are liberated which have antigenic properties and are capable of calling forth auto-antibody formation. These antibodies react in the test with the homologous lipids present in the tissue extract antigens. The different serologic patterns in different individuals depend on the qualitative and quantitative differences in the liberated lipids and their corresponding antibodies. In disease conditions the liberated lipids are likely to be of different chemical structure and thus give different serologic patterns. According to Kahn the serological test for syphilis is a restricted part of this universal serologic reaction.

We have made some observations on the universal serologic reaction in cases of syphilis, leprosy, eosinophilia, and suspected cases of kala-azar. Observation on sera of healthy individuals to define normal pattern in Indians have been included.

Technique

The technique used was based on the simplified procedure for universal serologic reaction as advocated by Kahn. Sera were heated at 56°C for ½ hour. Doubling dilution of sera were made from 1 in 2 to 1 in 256 in 9 different concentrations of saline varying from 0·0 per cent to 2·1 per cent. Kahn's antigen was diluted according to its titre and 0·025 ml. was added to each tube. After shaking the mixture for three minutes, 0·3 or 0·5 ml. of saline was added to each column of tubes. The strength of saline corresponded to that in which the nine dilutions were made. Readings were taken immediately, after 4 hours, and again after 24 hours of keeping in the refrigerator. Flocculation was recorded as in the Kahn's test for syphilis. A reading of one plus for any tube was neglected and recorded as negative, while a reading of more than one plus was taken as positive. In the graphs the shaded area represents the zones of flocculation. The different concentrations of sodium chloride used in the preparation of serial dilutions of serum have been arbitrarily divided, as suggested by Kahn, into three zones. In zone I the concentration extends from 0 to 0·15 per cent, in zone II from 0·6 to 1·2 per cent and in zone III from 1·8 to 2·1 per cent.

Results

Healthy individuals—Sera from seventy healthy individuals were studied ; of whom 55 were males

and 15 females. They were either students or donors in the Blood Bank and their Wassermann reaction and Meinicke tests were negative. The results are shown in Table 1.

TABLE 1—SHOWING THE RESULTS IN HEALTHY INDIVIDUALS

Extent of flocculation	Number of sera
No flocculation	18
Flocculation in the 1st zone only after 4 and 24 hours' incubation	16
Flocculation in the 2nd zone only after 4 and 24 hours' incubation	11
Flocculation in both the 1st and 2nd zones after 4 to 24 hours' incubation	25

A serological pattern from the fourth group is shown in Fig. 1. There was little or no flocculation without cold incubation though in some isolated instances it was present in the low salt concentration (1st zone). After 4 hours or 24 hours in the refrigerator 75 per cent of the sera showed some flocculation mostly marked in tubes with low and high salt concentration.

Syphilis—Universal serologic reaction was carried out in 15 cases with definite history of syphilis and whose W.R. was positive. All the cases showed moderate flocculation with a slight tendency to increase after 24 hours' incubation in the middle zone (Fig. 2).

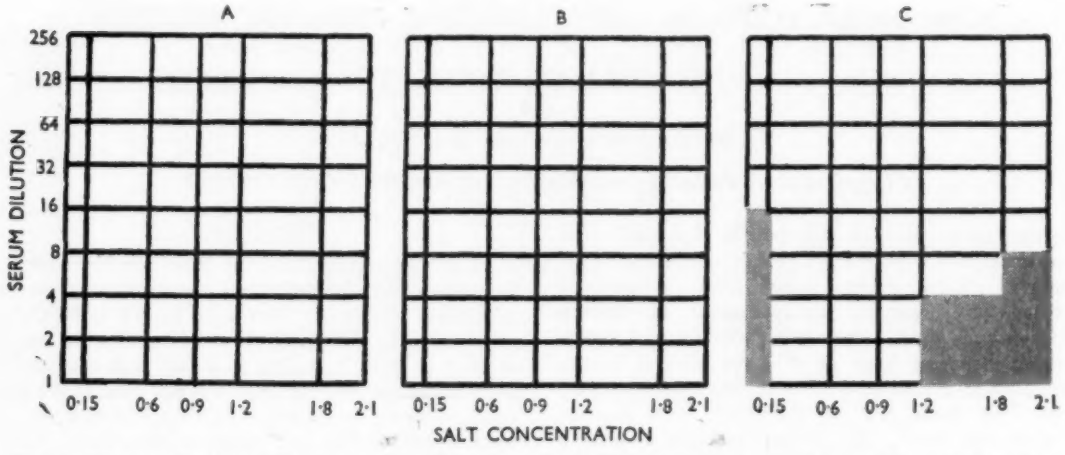

FIG. 1—SHOWING SEROLOGIC REACTION IN THE NORMAL. A—WITHOUT INCUBATION; B—AFTER 4 HOURS' INCUBATION IN REFRIGERATOR; C—AFTER 24 HOURS' INCUBATION IN REFRIGERATOR.

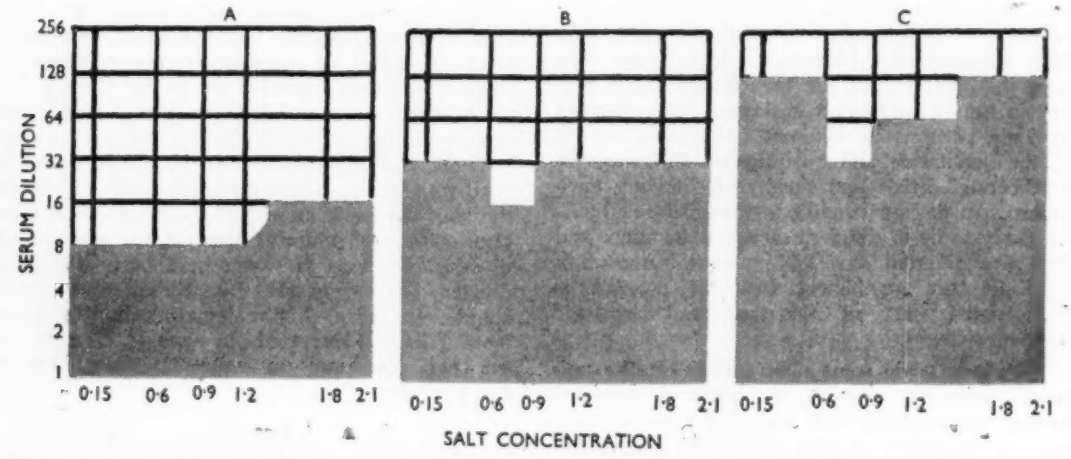

FIG. 2—SHOWING SEROLOGIC REACTION IN THE SYPHILITIC. A—WITHOUT INCUBATION; B—AFTER 4 HOURS' INCUBATION IN REFRIGERATOR; C—AFTER 24 HOURS' INCUBATION IN REFRIGERATOR.

Eosinophilia—Observations were made with sera from 76 cases with eosinophilia. The aetiology of these cases was not determined but almost all of them were referred to the clinical pathologist as cases of tropical eosinophilia with involvement of the respiratory system. The results are shown in Table 2.

TABLE 2—SHOWING THE RESULTS IN EOSINOPHILIA

Extent of flocculation	Number of cases
1. No flocculation	12
2. Flocculation in the 1st zone only after 4 and 24 hours' cold incubation ...	22
3. Flocculation in the 2nd zone only after 4 or 24 hours' cold incubation ...	4
4. Flocculation in both 1st and 2nd zones after 4 and 24 hours of cold incubation	38

A pattern from the fourth group is shown in Fig. 3. Total eosinophil count was not done but the differential count showed eosinophils to be from 30 to 85 per cent. It appeared that the serologic patterns did not correspond to variations in eosinophil counts.

Splenic enlargement—Observations were also made on 52 cases of spleen enlargement with a view to find out if universal serologic reaction could give useful information in cases of kala-azar. Of these, 17 sera gave a positive and 35 a negative aldehyde test. Cases with positive aldehyde test showed flocculation in the 1st zone. There was little change after 4 hours' incubation but the flocculation extended to lower dilutions of serum after 24 hours in the refrigerator. Some cases showed extension to other zones as well. Fig. 4

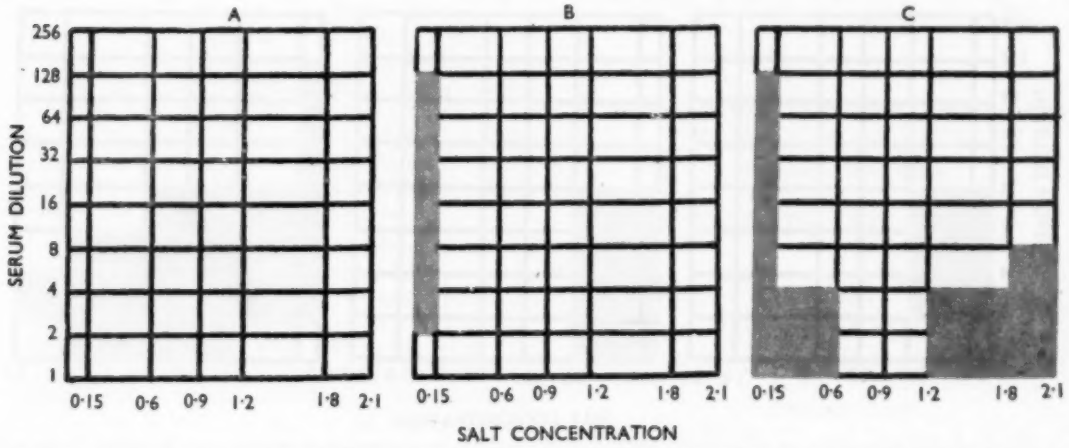

FIG. 3—SHOWING SEROLOGIC REACTION IN EOSINOPHILIA. A—WITHOUT INCUBATION; B—AFTER 4 HOURS' INCUBATION IN REFRIGERATOR; C—AFTER 24 HOURS' INCUBATION IN REFRIGERATOR.

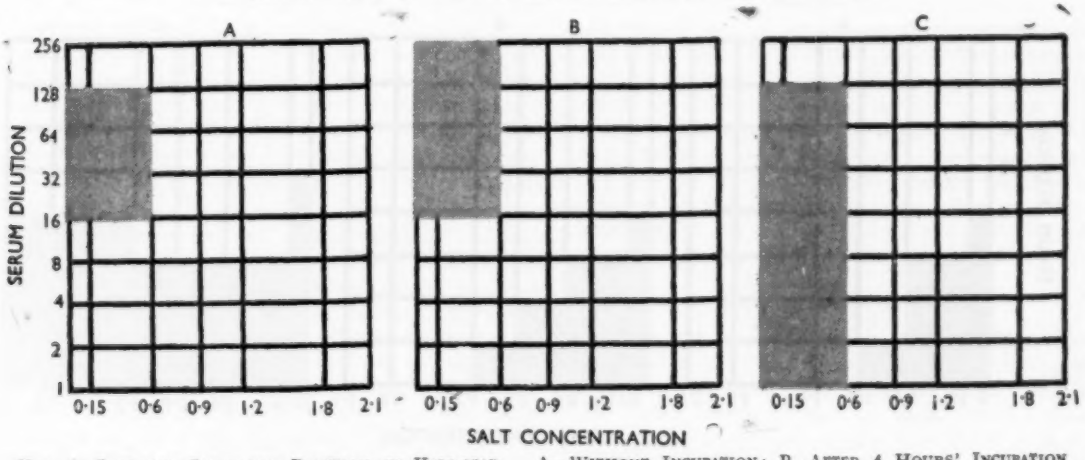

FIG. 4—SHOWING SEROLOGIC REACTION IN KALA-AZAR. A—WITHOUT INCUBATION; B—AFTER 4 HOURS' INCUBATION IN REFRIGERATOR; C—AFTER 24 HOURS' INCUBATION IN REFRIGERATOR.

shows a pattern from a case of kala-azar (aldehyde test positive). The results with sera from 35 cases suspected of kala-azar but with negative aldehyde test are shown in Table 3.

TABLE 3—SHOWING THE RESULTS IN SUSPECTED CASES OF KALA-AZAR

Extent of flocculation	Number of sera
No flocculation	9
Flocculation only after 4 and 24 hours' cold incubation	15
Flocculation in the 1st zone before and after cold incubation	11

Leprosy—Observations were made with sera from 106 cases of leprosy. The results are shown in Table 4.

TABLE 4—SHOWING RESULTS OF TEST IN LEPROSY

Extent of flocculation	Lepromatous	Number of sera from cases Neural
1. No flocculation ...	5	34
2. Flocculation after cold incubation only ...	3	46
3. Flocculation before and after cold incubation ...	8	10

Patterns from lepromatous and neural leprosy are shown in Figs. 5 and 6.

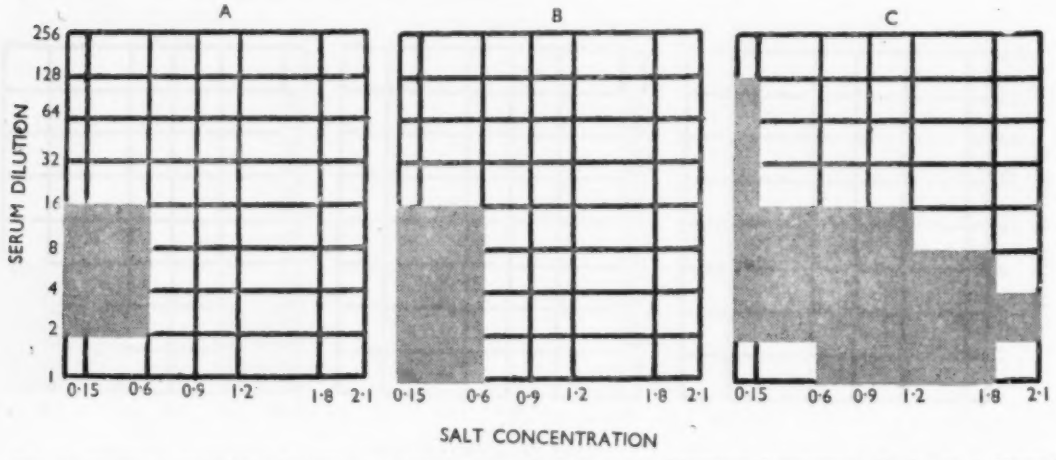

FIG. 5—SHOWING SEROLOGIC REACTION IN LEPROMATOUS LEPROSY. A.—WITHOUT INCUBATION; B—AFTER 4 HOURS' INCUBATION IN REFRIGERATOR; C—AFTER 24 HOURS' INCUBATION IN REFRIGERATOR.

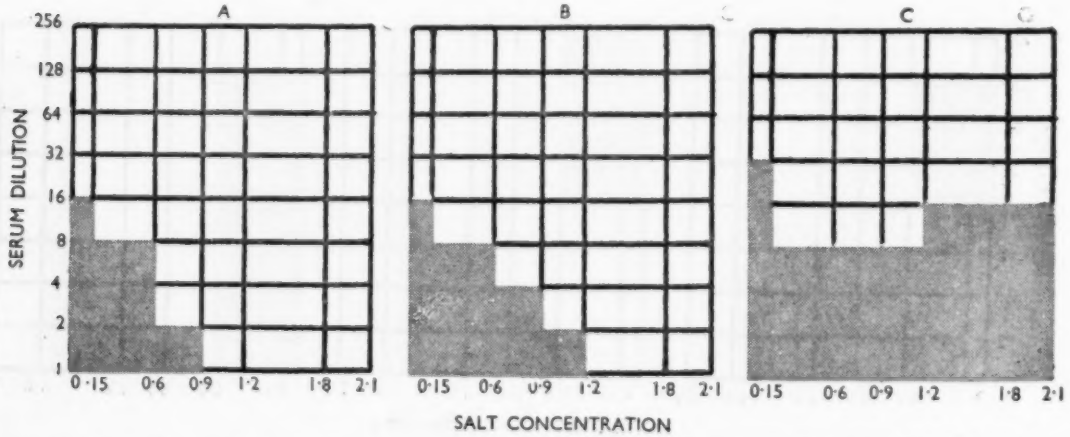

FIG. 6—SHOWING SEROLOGIC REACTION IN NEURAL LEPROSY. A—WITHOUT INCUBATION; B—AFTER 4 HOURS' INCUBATION IN REFRIGERATOR; C—AFTER 24 HOURS' INCUBATION IN REFRIGERATOR.

Discussion

Kahn observed three types of serologic patterns showing weak, moderate and unusually marked flocculation with normal sera. Our observations indicate that normal sera did not show any flocculation before cold incubation. About 25 per cent sera did not show any flocculation even after cold incubation. Only 5 out of 70 sera showed patterns with moderate flocculation. Patterns of marked flocculation were not seen. Thus, on the whole, sera from normal healthy individuals showed much less flocculation than observed by Kahn.

Sera from cases of tropical eosinophilia are known to give a false positive test for syphilis. 17 out of 76 cases of eosinophilia tested gave a positive Wassermann reaction. Out of these only 6 gave a positive Kahn's test and a typical universal serological pattern for syphilis. On the whole the serologic patterns were not significantly different from those observed with normal sera. Of the 38 cases of eosinophilia which showed flocculation in both zones, 12 showed flocculation in the 1st zone without incubation also. The range of flocculation varied from slight to marked degree especially after 24 hours and it had no relation to the percentage of eosinophils.

Leprosy is another condition where serological test for syphilis may be falsely positive. Kahn found with sera from cases of leprosy flocculation increased on cold incubation while in syphilis it changed only a little. He also noted when that syphilis was present along with leprosy the flocculation patterns varied according to the predominance of the activity of one or the other disease. According to Kahn, marked flocculation patterns may be noted in moderately active lepromatous leprosy. Flocculation was, however, much less marked with sera from cases of excessive or minimal leprotic lesions. In neural leprosy flocculation was also much less marked. The results obtained in our series of cases were similar except that the flocculation observed was much less marked in most cases. Syphilitic pattern predominated with sera whose Kahn's test for syphilis was positive.

Flocculation without cold incubation was also seen with sera from cases of kala-azar where aldehyde test was positive. It was absent in about 65 per cent cases of splenic enlargement where aldehyde test was negative. 31 sera from pyrexia cases of all types were also studied. Of these, 20 showed no flocculation before or after cold incubation. 11 cases showed flocculation only after cold incubation for 4 and 24 hours. Thus in cases of suspected kala-azar the flocculation without incubation could not have been due to fever alone.

Summary

Universal serologic reaction, using Kahn's antigen diluted with varying strengths of sodium chloride, has been carried out with sera of healthy individuals and their patterns of flocculation noted.

The serologic patterns were also noted with sera from cases of eosinophilia, splenomegaly, syphilis and leprosy. It would appear that the universal serologic reaction may show distinctive patterns of flocculation in well established cases of kala-azar. The reaction may be helpful in cases of eosinophilia and leprosy where serological tests of syphilis are sometimes falsely positive.

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BASAL BODY TEMPERATURE DURING THE MENSTRUAL CYCLE IN YOUNG WOMEN

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Introduction

This investigation is the outcome of the interest evoked in the study of 'ovulation time', consequent on the discussions held in the department, on the subject of physiology of reproduction during the visit of Dr. Pommerenke of Rochester University who was a Visiting Professor to the Madras Medical College in the spring of 1954. An attempt has been made to record the basal body temperatures, in healthy young women between the ages of 17 and 25 years, during the different phases of the menstrual cycle. The results of analysis of the records for fifty cycles are presented.

Review of Literature

The first to call attention to the recurring fluctuations in the basal body temperature during the different phases of the menstrual cycle was Van De Velde (1904) quoted by Selle (1952). Since that time, numerous papers have dealt with the subject, particular emphasis being placed on the correlation of temperature changes and ovulation.

Hamilton and Boyd (1937) have shown that the normal body temperature has a cyclic variation throughout the menstrual cycle. They observed that in a cycle of 28 days' duration, at about the fourteenth day, there is a lowering of temperature, which is followed by a rise which persists until the onset of the succeeding menstrual period during which again there is a slight drop in the temperature. After menstruation, they observed a second and slight rise which persisted until the mid-interval, when there is a drop again which coincides with ovulation. Zuck (1938) had found by checking up daily records of basal body temperatures against vaginal smears that ovulation occurs between the temperature drop and temperature rise. Du Bois (1939) quoted by Selle (1952) has observed that the basal body temperature drops about 1°F, a few days before the onset of menstruation and then it rises slowly and maintains a level until about the fourteenth day. At this point, ostensibly corresponding to ovulation there is a short drop of about 0·4° F. followed by a rise of approximately 0·5° F. above the previous level. Robenstein (1944) has observed a noticeable drop towards the mid-menstrual phase followed by a fairly high rise of about 0·5 to 1° F. The observations of Gruelick and Black (1943), quoted by Buxton and Eagle (1950), Williams (1943), Klaften (1944), Tompkins (1944) and other workers also confirm the original findings of Hamilton and Boyd. Klaften (*loc. cit.*) registered body temperatures with ordinary clinical thermometers before rising from bed in the morning, usually at about 6 a.m. He made daily observation of the temperature and pulse under basal conditions and found variations in correlation with the different phases of the menstrual cycle. Halbrecht (1945) has shown through studies of basal body temperature charts in individuals that the pre-ovulatory phase of lower temperature is due to oestrogen activity and the postovulatory higher temperature is produced by progesterone. Davis and Fugo (1948) have also shown that the rise of temperature in the postovulatory phase is due to progesterone and that ovulation coincides with the rise after the drop. Hepp and Pittsburgh (1943) in a study of progesterone metabolism in 14 individuals also made a similar observation. Basal body temperatures have been observed to vary between 36·3 and 36·8°C. in the pre-ovulatory phases and rising from 37° C. to 37·3° C. in the postovulatory, these differences being observed during the ovulatory cycles.

Materials and Methods

Thirty women students of the Madras Medical College have acted as volunteers for this investigation. Girls of the age groups ranging from 18 to 21 years were the subjects, all of them of almost similar heights and weights and also of an almost uniform constitution and health. They were also of almost similar socio-economic circumstances and working habits. Special temperature charts were printed and distributed to the volunteers along with suitable instructions for recording the temperature regularly under standard conditions.

1. They were instructed to take oral† temperatures, on waking in the morning, after the night's rest.

2. Clinical thermometers‡ of the same type were used by them.

3. Variations in activity, lack of sleep, cold or other indisposed states, the time of recording and other factors likely to influence the daily record were also noted on the charts provided.

Charts showing typical thermal shift (as described in text) were first separated from those which did not show the shift or which were irregular. The percentage of the charts showing shifts was determined. Then the charts with the characteristic shift were subjected to further analysis to study

1. The duration of the oestrogenic phase ; this being the interval from the first day of the preceding menstrual period to the day of drop of temperature (Table 1 and Fig. 1).

Table 1—Oestrogenic Phase

No. of days	No. of cycles in each group	Percentage of total
10 ...	1	2
11 ...	2	4
12 ...	8	16
13 ...	12	24
14 ...	8	16
15 ...	7	14
16 ...	8	16
17 ...	2	4
18 ...	2	4

Range of duration—10 to 18 days. Average duration—14·8 days.

2. Duration of the luteal phase—this being the interval from the day of rise following the steep drop up to the onset of the succeeding menstruation (Table 2 and Fig. 2).

† It is admitted that rectal or vaginal temperatures would have been more acceptable for scientific investigation. But for various reasons, the volunteers preferred to take oral temperatures.

‡ Special thermometers for basal body temperature were also obtained. But they are very costly and not enough for all volunteers. Hence only clinical thermometers were employed for this investigation.

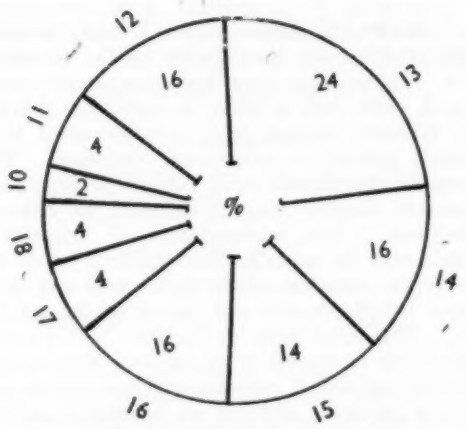

FIG. 1—SHOWS VARIABILITY OF THE OESTROGENIC PHASE. NUMBERS OUTSIDE THE CIRCLE INDICATE DAYS.

TABLE 2—LUTEAL PHASE

No. of days		No. of cycles in each	Percentage of total
11	...	2	4
12	...	5	10
13	...	15	30
14	...	17	34
15	...	7	14
16	...	2	4
17	...	1	2
18		1	2

Range of duration—11 to 18 days. Average duration—13·7 days.

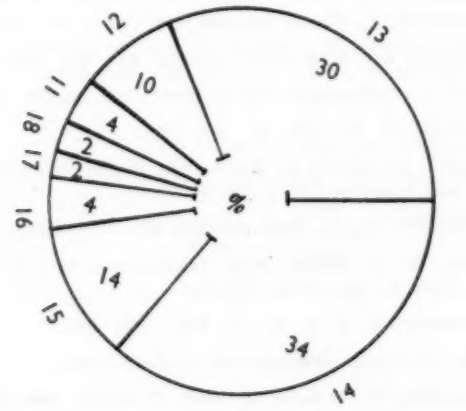

FIG. 2—SHOWS VARIABILITY OF THE LUTEAL PHASE. NUMBERS OUTSIDE THE CIRCLE INDICATE DAYS.

3. Nature and degree of the thermal shift (Tables 3, 4, 5 and 6 and Fig. 3).

TABLE 3—THERMAL SHIFT

Span of shift in days		No. of cycles in each group	Percentage of total
3	...	24	48
4	...	26	52

Average span of thermal shift—3·5 days.

TABLE 4—DAY OF OCCURRENCE OF THE DROP IN TEMPERATURE

The day		No. of cycles in each	Percentage of total
11	...	1	2
12	...	4	8
13	...	16	32
14	...	18	36
15	...	7	14
16	...	2	4
17	...	1	2
18	...	1	2

Range of occurrence of drop—11 to 18 days.

TABLE 5—RANGE OF TEMPERATURE DROP

Degree of drop		No. of cycles in each	Percentage of total
0·4°	...	5	10
0·5°	...	7	14
0·6°	...	13	26
0·7°	...	20	40
0·8°	...	5	10

Range of drop in temperature—0·4°F to 0·8°F. Average drop in temperature—0·62°F.

TABLE 6—RANGE OF POSTOVULATORY RISE IN TEMPERATURE

Degree of postovulatory rise		No. of cycles in each	Percentage of total
0·8°	...	2	4
0·9°	...	4	8
1°	...	12	24
1·1°	...	10	20
1·2°	...	9	18
1·3°		10	20
1·4°	...	3	6

Range of postovulatory rise in temperature—0·8°F to 1·4°F. Average rise in temperature—1·12°F.

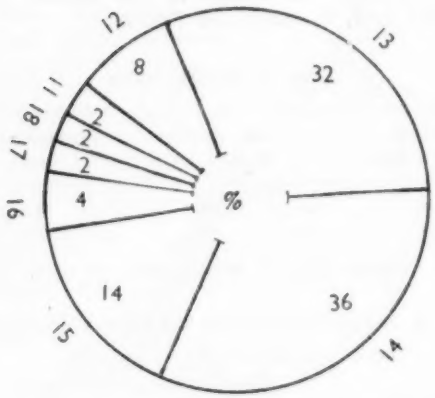

FIG. 3—SHOWS VARIABILITY IN THE DAY OF OCCURRENCE OF THE DROP IN TEMPERATURE. NUMBERS OUTSIDE THE CIRCLE INDICATE DAYS.

CONCLUSIONS

On analysis of our series of 50 cases in this series on B.B.T., the duration of the oestrogenic phase has been ranging from 10 to 18 days, with a peak of records showing a duration of 13 days, with the average duration striking at about 14·8 days. The luteal phase is observed to vary from 11 to 18 days with a maximum of records showing 14 days, and the average duration being 11·7 days. The drop in temperature in these biphasic records, occurs in a maximum number of cases on the 13th and 14th days, the range of the day of occurrence of the drop being from 11 to 18 days and the average day of occurrence of the drop in temperature being the 13·2th day. The average drop in temperature is observed to be 0·62° F with a minimum drop of 0·4° and a maximum of 0·8° F. The range of postovulatory rise in temperature has been recorded as between 0·8° F and 1·4° F with an average rise of temperature of 1·12° F. This thermal shift occupies an average span of 3·5 days.

SUMMARY

Normal menstruating women have a biphasic temperature reaction during their menstrual cycles characterised by a low plateau during the first half of the cycle (oestrogenic phase) and a higher one during the latter half (luteal phase). The rise in temperature occurs at about ovulation and is in the vast majority of cases about two weeks before the next expected period. The temperature rise indicates that ovulation has occurred one or two days before, or will occur one or two days after, or is occurring at the moment of the temperature rise. Basal body temperature is a fairly accurate index of the time of ovulation in the menstrual cycle. Variations in basal body temperature occur in each cycle with a fairly characteristic pattern. The typically normal cycle is represented by a biphasic pattern of temperature variations. This nature of the normal cycle reflects perhaps some hormonal changes and is different in different individuals. The interpretation of temperature charts, may be actually individualistic with respect to the durations of the oestrogenic and luteal phases and the nature and degree of the thermal shift. The basal body temperature is a physical sign which represents an interesting physiological phenomenon and if recorded and interpreted suitably, it indicates whether an individual ovulates or not, when she ovulates, and lastly whether anything is wrong with the hormonal influences upon the menstrual cycle.

ACKNOWLEDGMENT

We wish to place on record the willing co-operation and the spirit of enquiry of the lady students of this college during 1954-1955.

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THERAPEUTIC RESPONSE TO SINGLE DOSES OF CHLOROQUINE DIPHOSPHATE IN HUMAN MALARIA

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In an earlier publication, Singh *et al* (1953) recorded their observations on single dose regime with amodiaquin and chloroquine for the treatment of 92 *P. vivax* and 169 *P. falciparum* cases in rural India. The dosage schedules adopted were 0·6 and 0·4 g. in both cases.

From the data presented, it was observed that in *P. vivax* infections, chloroquine diphosphate effected the clearance of asexual parasites from the peripheral circulation in all cases within 48 hours irrespective of the dosage schedule adopted. However, it should be stated that the number of cases of vivax malaria treated with 0·4 g. was small and therefore the authors could not confer a definite opinion on this dosage. In *P. falciparum* infections, such rapid clearance was observed only in those cases treated with 0·6 g. Under 0·4 g. dosage schedule, the time taken for parasite clearance in 100 per cent of cases was somewhat longer (72 hours). Therefore the authors concluded that the higher dosage schedule was preferable in the treatment of falciparum malaria.

In the present paper, the authors record the results of their observations on the therapeutic response to a single dose of

(*b*) 0·6 g. of base (4 tablets) of chloroquine diphosphate in 49 cases of *P. vivax* and 7 cases of *P. falciparum* infection.

(*b*) 0·6 g. of base (4 tablets) of chloroquine diphosphate in 18 cases of *P. falciparum* infection.

The cases were all adults from amongst the Delhi Police Force. Most of these cases had contracted malaria while on leave or training away from Delhi. Many of them gave history of malarial attacks in the past. The treatment was carried out at the local Police Hospital during 1954-1955. Temperature was recorded morning and evening and blood smears were examined daily.

The criteria of activity of the antimalarial was judged by the speed of clearance of asexual parasites from the peripheral circulation and the relief of clinical symptoms (fever).

The results of the trials have been indicated in Table 1.

Therapeutic response to 3 tablets was quite satisfactory in vivax malaria in that 36 patients (73·4 per cent) were afebrile within 24 hours. Asexual parasite clearance attained was even faster, as over 83 per cent were free from parasites in the peripheral circulation within 24 hours. Eleven of these cases (not included in the series) had shown gametocytes at the initial stage. They disappeared within 24 hours after treatment in 6, and in the rest within 48 hours. Thus the overall response to 0·45 g. of chloroquine diphosphate in vivax malaria appears to be encouraging.

Clinical response to the same dosage of the antimalarial in falciparum malaria, was not found to be as prompt as in vivax malaria. Only 14·2 per cent of cases became afebrile within 24 hours. The rate of clearance of asexual parasites was somewhat similar. Compared to these, the therapeutic response to 0·6 g. of chloroquine in this infection appeared to be much faster as 77·7 per cent of cases were afebrile within 24 hours. Parasite clearance was equally rapid within the first 24 hours though clearance in 100 per cent of cases

TABLE 1—SHOWING RESPONSE TO CHLOROQUINE DIPHOSPHATE

Infection	No. of cases	Dose (in terms of base)	Period in hours to attain relief of symptoms			Period in hours in which asexual parasite clearance was attained.		
			24	48	72	24	48	72
P. vivax ...	49	0·45 g.	36	12	1	41	8	—
P. falciparum ...	7	0·45 g.	1	3	3	1	4	2
	18	0·6 g.	14	4	—	14	2	2

was not attained until after 48 hours (within 72 hours). Thus compared to the higher dosage schedule, reaction to 0·45 g. in falciparum malaria would appear to be somewhat tardy.

There was no case showing untoward side effects of the drug.

Discussion

With the advent of synthetic antimalarials like the 4-aminoquinolines, it became possible to reduce the number of sick days to a very considerable extent as these drugs are capable of relieving the clinical symptoms in majority of the cases within 24 hours, and in most of them within 48 hours. In this connection, the authors wish to stress the importance of the relief of clinical response 'within 48 hours' as against 'within 72 hours'. The former means that there are no subsequent bouts of fever after the first one when treatment was commenced, whereas relief of clinical symptoms 'within 72 hours' (in vivax or falciparum malaria) evidently means that he becomes free from fever only after the second bout. As each bout restricts the patient to bed, causes destruction of large number of erythrocytes and debilitates him, it is obvious that the lesser the number of malarial paroxyms, the fewer would be the loss of man-hours. This is particularly vital for the wage earners and the cultivators. Therefore, development of these compounds, has no doubt, paved the path for quicker recovery from attacks of malaria.

Further, it has been established that such relief can be brought about by the administration of only a single dose of any of the 4-aminoquinoline series antimalarials. Like many workers in the field, Chaudhuri and Chakravarty (1948) recommended single dose treatment with synthetic antimalarials.

Such single dosage schedules ranging from 0·4 to 0·6 g. of chloroquine have been recently used by several workers for the treatment of malaria cases amongst semi-immune population in malarious districts. Van der Walle (1940) reported that a single dose of 0·6 g. (for adults) was sufficient to bring the temperature to normal within 24 hours, and in the clearance of asexual parasites within 48 hours. With a dose of 0·5 g., Chaudhuri *et al* (1950) achieved a fair measure of success. In all the cases in their series, asexual parasite clearance was attained within 48 hours. During the same period, 13 out of 14 (92·9 per cent) cases of vivax malaria were free from fever. The response to the same dose of drug in falciparum malaria was not so spectacular as only 8 out of 11 (72·8 per cent) cases became afebrile during the same period. Hoekenga (1952) observed that the therapeutic response to 0·45 and 0·6 g. of chloroquine in vivax malaria was somewhat similar in both the groups but in falciparum infection relief of clinical symptoms and parasite clearance were attained somewhat earlier with the higher dosage schedule.

Subsequently, Singh *et al* (1953) reported that with a dose of 0·6 g. of chloroquine diphosphate, parasite clearance was attained in all the 65 cases (24 *P. vivax* and 41 *P. falciparum*) within 48 hours. Similar response was observed in vivax cases when they were treated with a smaller dose like 0·4 g. However, in falciparum malaria, the time taken for parasite clearance in 100 per cent of cases was somewhat longer (72 hours). From the present investigations, it may be noted that therapeutic response to 0·45 g. of chloroquine in vivax malaria was excellent as 98 per cent of cases were afebrile within 48 hours and parasite clearance was attained in all cases during the same period. But in falciparum cases, clinical response was somewhat slow with the same dosage, as only 4 out of 7 cases (57 per cent) were free from fever within 48 hours and during this period the asexual parasites had disappeared in 71 per cent of cases. But with the higher dose of 0·6 g., the response was highly satisfactory as in 88·8 per cent (16 out of 18) of cases, parasite clearance had occurred within 48 hours and all cases became afebrile during the same period.

From these observations, it would appear that the therapeutic response to 0·4, 0·45, 0·5 or 0·6 g. in vivax malaria is more or less the same in patients residing in malarious districts. But the response is somewhat different in falciparum malaria. This is particularly so with reference to the relief of symptoms which, from the point of patients' view, is more important than parasite clearance. The overall picture in this infection appears to be that with a dose of 0·45 g. of chloroquine (as in the present series), clinical response within 48 hours was attained in 57 per cent of cases only ; with 0·5 g. (Chaudhuri *et al*, 1950) such response was noted in 76 per cent of patients, whereas with 0·6 g. (as in the present series) it was 100 per cent. Thus in falciparum malaria, the therapeutic response to the highest dosage schedule (0·6 g.) would appear to be the best. Furthermore, no untoward side effects were recorded in this series with the single dosage regimes.

Although neither the authors had experienced any failure when patients were treated with 0·6 g. or doses lower than that nor Chaudhuri *et al* (1950) and Chaudhuri (1952) have reported any failure, Hoekenga (1952) had observed that out of

220 cases of vivax malaria treated with 0·45 or 0·6 g. of chloroquine, 6 cases failed to respond. Of these, five cases were treated with 0·45 g. and one with 0·6 g. According to Scheel (1953) who had treated 2500 cases of malaria, a single dose of 0·6 g. of chloroquine is the minimum effective dose and that "a smaller dose than 4 tablets was found insufficient".

As facilities for microscopic diagnosis of malaria cases are not available to most practitioners, particularly in rural areas, a dose of 0·6 g. should, therefore, be the standard schedule for treatment of all cases of malaria when the single dosage regime is adopted, as it should be, in partially-immune population. Analysis of data shows that schedules higher than 0·6 g. administered as a single dose or spread over for two or three days, do not necessarily show better results but at the same time are likely to give rise to untoward side symptoms (Chaudhuri and Chakravarty, 1948; Singh *et al*, 1951). Furthermore, the single dose regime is more economical than the full course of treatment. Based on these considerations, 0·6 g. of chloroquine or amodiaquine has been advocated (Singh, 1954; World Health Organization, 1954) as the optimum dose for partially-immune population. The present investigations confirm the wisdom of such recommendations.

Summary

A total of 64 cases were treated with a single dose of chloroquine diphosphate. The dosage schedules adopted were 0·45 g. of base (3 tablets) for 49 cases of *P. vivax* and 7 cases of *P. falciparum* and 0·6 g. of base (4 tablets) for 18 *P. falciparum* cases.

In vivax malaria, relief of clinical symptoms was attained in 98 per cent within 48 hours and in 100 per cent within 72 hours. Asexual parasite clearance was recorded in all cases within 48 hours.

Therapeutic response to 0·45 g. of chloroquine in falciparum malaria was found to be somewhat slower than 0·6 g. as relief of clinical symptoms within 48 hours was observed only in 57 per cent under the former and 100 per cent under the latter regime. During the same period, asexual parasite clearance was observed in 71 and 88·8 per cent of cases, respectively.

Acknowledgment

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CASE NOTES

QUININE AMBLYOPIA TREATED WITH ACTH

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The recent report of a case of quinine amblyopia treated by stellate ganglion block in addition to vasodilators has prompted us to report the following case wherein the administration of ACTH after a preliminary trial with vasodilators definitely seems to have hastened complete recovery of the vision.

Case Report

P., male, aged 22 years, was admitted on 16-7-55 with a history of fever, headache and pain all over the body, of three days' duration. He had not taken any drug recently prior to admission. The patient was not anaemic, the temperature on admission was 102°F, clinical examination did not reveal any obvious cause for fever. The liver and spleen were not palpable.

Urine examination showed normal findings. W.B.C. was 7250/c.mm. with polymorphs 75 per

cent, lymphocytes 22 per cent and eosinophils 3 per cent. No malarial parasites were seen in the smear examination of the blood. The patient was put on quinine sulphate mixture, one ounce thrice daily (10 grains of quinine per ounce) on the 16th and 17th July. On the night of 17th July, after the last dose of quinine, at about 8 p.m. the patient had a rigor followed by profuse sweating the temperature at the time being 100°F. Suddenly he complained of complete loss of vision in both the eyes. Administration of quinine was stopped forthwith. The ophthalmic examination next morning showed: Widely dilated pupils not reacting to light; optic discs and retinae were pale; the arteries were very narrowed, with slight dilatation of the veins and marked oedema of the macula, a picture characteristic of quinine amblyopia. Blood VDRL and CSF VDRL were negative. Cerebrospinal fluid was normal. Nicotinic acid 100 mg. was given I.V. following which there was not much improvement. Sixteen hours after the onset of amblyopia, retrobulbar injection of 2-benzyl-imidazoline hydrochloride in 2 c.c. doses was given to the right eye and acetyl choline 1 c.c. retrobulbar to the left eye. Immediately after the injections there was some though not marked, improvement in vision, the patient being able to count fingers close to the eye. 2-benzyl-imidazoline hydrochloride, 2 tablets t.d.s., penicillin 5 lac units I.M., b.d., and B_{12} 250 μg. I.M., b.d. were administered from the 18th July for one week. The temperature became normal on the 21st July and remained so till discharge. Inspite of continued therapy with vasodilators for one week, the vision did not show any improvement beyond counting of the fingers close to the eyes. It was, therefore, decided to try the effect of ACTH and accordingly ACTH 20 units per day was administered I.V. in glucose saline by drip for ten days. From the second day of the administration of ACTH the patient began noticing gradual and fairly rapid improvement of vision. At the end of the course the vision was 6/6 each eye, the field of vision by perimetry was normal. There was slight pallor of the optic discs. The patient was discharged and when he reported one month later was found to have normal vision with normal fundus picture.

Discussion

The toxic effects of quinine are well-known and need no repetition. Some individuals are exceptionally sensitive to this drug, such hypersensitivity being manifest usually after prolonged administration of quinine. However, in some susceptible persons a dose as small as one grain may produce transient disturbance of vision. There is as yet no satisfactory explanation for the wide range of sensitivity to this drug.

Toxic amblyopia is a form of blindness partial or complete which is caused by the action of exogenous poisons on the subchiasmal portion of the visual path, the ganglion cells or nerve fibres. Nerve poisons are notoriously selective and two main groups of amblyopias may be distinguished by their choice of site.

Group 1—By far this is the larger group. The papillomacular bundle is the site of predilection and a central or centrocaecal scotoma is the characteristic feature. The causative agents are tobacco, alcohol, arsenic, lead, carbon disulphide.

Group 2—The peripheral elements are selected for attack and contraction of field without scotoma is the manifestation. The causative agents are quinine, salicylic acid, filix mas.

In most cases of toxic amblyopia there is spontaneous tendency to recover if the agent is removed. But in some the recovery is very slight especially in group 1.

In quinine amblyopia there is sudden onset of rapid and complete blindness. After the lapse of some hours, or it may be days, central vision begins to return but the restoration of peripheral vision, lags conspicuously behind. Deafness, tinnitus, and vomiting may precede the onset of blindness. In the case reported above these preceding symptoms were absent. During the initial stages the pupils are widely dilated and immobile.

Perimetric studies have not shown any change in the field of vision which could suggest a lesion at a level higher than the optic nerves. The suprachiasmal portion of the visual pathway would thus appear to be almost immune to toxic and inflammatory disorders. Some restoration of eyesight may always be expected in quinine amblyopia. Even after several months some improvement may still take place.

Glick and Mumford (1955) have reported recovery in a case of quinine amblyopia where in addition to vasodilators and B-group vitamins, stellate ganglion block was done bilaterally. Paracentesis of the anterior chamber or corneoscleral trephining is recommended by some (Duke-Elder, 1940). There is general agreement that the vasospasm should be relieved by vasodilators as vasoconstriction leads to severe damage of the retina. The vasodilators usually employed are nicotinic acid, papaverine, 2-benzyl-imidazoline hydrochloride and vitamin B_1 (which given I.V. has vasodilator effect), acetyl choline, amyl nitrite, etc.

In the case presented, vasodilators were employed for one week from the onset but as the vision did not show improvement beyond counting of fingers close to the eye, ACTH was administered. One of the most striking effects of ACTH is the ability of the hormone to modify the response of certain derivatives of the primitive mesenchyme, particularly connective tissue, to injury. Since quinine is supposed to act directly on ganglion cells and nerve fibres it was hoped that administration of ACTH will suppress the connective tissue proliferation which may follow such toxic action of quinine and thereby minimise or prevent altogether any residual visual loss. It was gratifying to note that at the time of discharge the vision was perfectly normal in this patient. ACTH appears to have definitely restarted the

recovery process from a position of stalemate and hastened the restoration of normal vision.

Summary

A case of quinine amblyopia is presented and the pathogenesis of amblyopia is discussed.

The immediate response to vasodilators raised hopes but progress came to a standstill soon after.

Administration of ACTH appears to have hastened the recovery.

Acknowledgments

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COMPLETE HEART BLOCK

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Heart block is occasionally met with in general practice, commonest causes being administration of digitalis, acute rheumatic fever, diphtheria, syphilis and coronary involvement. A partial degree of heart block is far more common than the complete heart block. Sino-auricular block is extremely rare and is of little significance from the practical standpoint. The first degree of AV block as evident from the increase in the P-R interval can only be ascertained by the electrocardiogram. Second degree and third degree (complete) of AV block can be detected very often clinically by the bedside of the patient. A complete heart block due to the coronary involvement is generally permanent, in rare cases it may turn to an incomplete block. The block may sometimes completely disappear and the rate and rhythm come to normalcy (Levine, 1946; White, 1947).

A case where complete heart block persisting for near about 2 months, suddenly reverted to normal rhythm, is reported.

Case Report

A male patient, 73 years old, noticed occasional slowness of the pulse, the rate varying between 50-60 per minute. He was examined in the midweek of August 1954 for giddiness, fatigue and digestive disturbances with flatulence. The patient gave a history of having suffered from a severe attack of enteric fever with haemorrhage in November 1953. The patient was a chronic sufferer from diabetes mellitus (28 years) and hypertension (20 years) for which he was being treated with insulin and *R. serpentina* respectively and was fairly well. On examination the pulse was 60 per minute and regular and the blood pressure 150/80 mm. Hg. The apical impulse was in the 6th intercostal space just outside the midclavicular line and heaving in nature. Heart sounds were much more distinct on sitting than on lying. First sound over the mitral area was a little loud and prolonged. There was no other abnormality.

Laboratory examination: Urine—no abnormality. Stool—*E. histolytica* cysts were present.

On 13-9-54 pulse rate came down to 30-35 per minute. It was regular. The blood pressure was 130/50 mm. Hg. and there was profuse perspiration with cold extremities. Ephedrine hydrochloride was administered orally ½ gr. thrice daily. W.R. and Kahn tests were negative.

Electrocardiogram taken on 27-9-54 (Fig. 1) showed a slow ventricular rate of 33 per minute, auricular rate of 100 per minute and a dissociated AV rhythm signifying complete heart block. Thickened S in L_1 with wide tall R in right side of the chest lead, associated with M shaped QRS in V_2 and V_3 signifies Wilson's type of bundle branch block. In L_2 and L_3 two QRS complexes are in different directions—thus these two may have separate foci. The grossly diminished ST in V_5 and V_6 signifies myocardial ischaemia, supported by further evidence of distorted ST segments.

The patient was prescribed complete rest, salt restricted diet and was given oral aminophylline and vitamin B complex tablets. He was closely observed for 2 months. The pulse rate improved from 10-11-54 with a variation from 60 to 80 per minute. Occasional irregularities of the pulse were noted from time to time. On 17-11-54 the pulse was 74 per minute and regular. The blood pressure was 150/80 mm. Hg. General condition of the patient was satisfactory. A second electrocardiogram taken on 23-11-54 (Fig. 2) showed that the previous complete heart block had disappeared and the normal rate and rhythm restored, although the evidence of myocardial ischaemia and the Willson's type of bundle branch block was present.

The patient enjoyed fairly good health for about 4 months and was allowed to pursue his usual occupation and to go out for a short walk although the physical activities were somewhat curtailed. In the middle of April 1955 his condition suddenly became worse. He developed typical Stokes Adams syndrome and inspite of energetic treatment he ultimately succumbed.

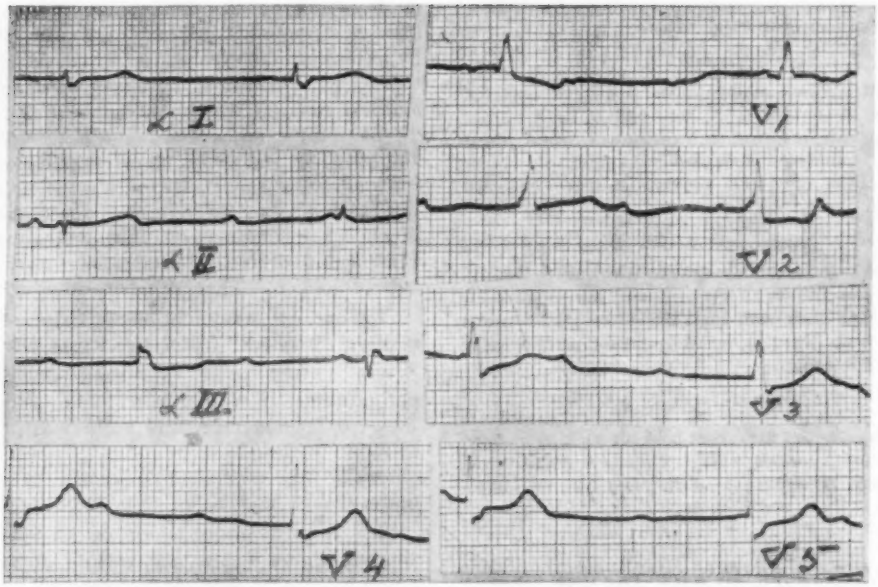

FIG. 1—E.C.G. TAKEN ON 27-9-54 SHOWING COMPLETE HEART BLOCK.

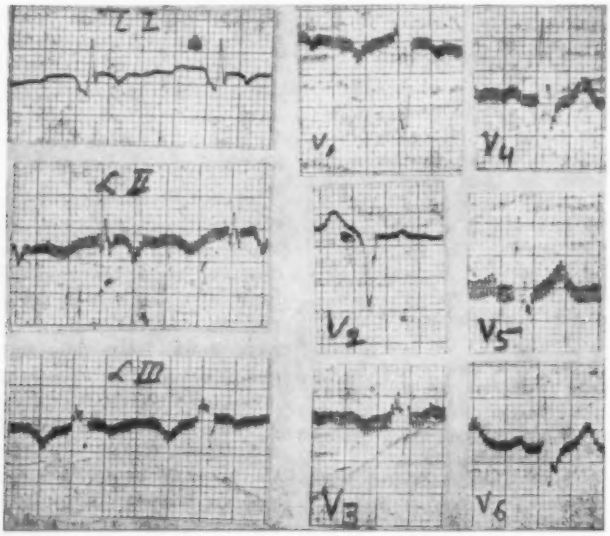

FIG. 2—E.C.G. TAKEN ON 23-11-54 SHOWING NO EVIDENCE OF HEART BLOCK AS IN E.C.G. OF 27-9-54.

SUMMARY

A case of complete heart block persisting for about 2 months, and reversal to a normal rate and rhythm which continued for about 3 months has been described.

ACKNOWLEDGMENT

I wish to express my thanks to Dr. S. C. Das, Calcutta, for giving me opportunities to study his case and assisting me in the collection of the case records.

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JOURNAL OF THE
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THE INDIAN MEDICAL COUNCIL BILL, 1956

Recently the Rajya Sabha (Upper House of the Indian Parliament) has passed the Indian Medical Council Bill, 1956, "to provide for the reconstitution of the Medical Council of India and the maintenance of a medical register for India and for matters connected therewith." After a careful perusal of this bill, it would be obvious that the bill has been so arbitrarily drafted that it is not likely to serve any useful purpose for the betterment of medical education in India. Before the bill is presented to the Lok Sabha (Lower House of the Parliament), it needs a thorough revision, lock, stock and barrel.

The principal functions of a statutory medical council in any country should be maintenance of: (1) proper standard of medical education in all its aspects—undergraduate and postgraduate, (2) a register for registered medical practitioners, (3) a proper standard of medical ethics, and (4) reciprocity with other countries and States. In certain countries like Bulgaria, China, Czechoslovakia, Denmark, Egypt, Luxemburg, Netherlands, Norway, Palestine (Arab and Jewish), Switzerland and Iceland, these functions of the medical councils are performed by the Ministry of Health and officers deputed by the Government. In other countries the Government make statutory provisions for the formation of a medical council to carry out the above-mentioned functions. In comparatively smaller countries like Eire, Finland, Great Britain, New Zealand, South Africa and Sweden, there is only one central statutory medical council for the whole country. In large and multi-State countries like Australia, Canada and the United States of America, where Governments are formed on the federal system, each State has its statutory medical council (named as the Board or College of Physicians and Surgeons) formed in accordance with the relevant medical act of the State. In Australia, Canada and the United States of America, there is, therefore, no official register for registered medical practitioners for the country as a whole. Each State maintains its own register of licensed practitioners prepared by the State licensing medical authority which is also made responsible for the maintenance of a proper standard of medical education and ethics in the State. The task of co-ordination and co-operation between the various State medical licensing boards or colleges has been taken up chiefly by the powerful national professional associations of these countries.

In India, statutory Provincial or State Medical Councils had been formed from the year 1914 to provide for the registration of licenced medical practitioners and to see that the proper standard or standards of medical education and medical ethics are maintained in the State or States concerned. In 1933, the Government of India passed an Indian Medical Council Act to constitute a medical council in India "in order to establish a uniform minimum standard of higher qualifications in medicine for all provinces." Such an act was then considered essential primarily to maintain a uniform standard of medical education imparted in the medical colleges and standard of the M.B.B.S. examinations conducted by the various Universities in India and to establish reciprocity between Indian and foreign countries in respect of registration of qualified doctors. It may be noted in this connection that during the last 23 years of the life of the Medical Council of India, the Council has not been entrusted with the duties of furthering postgraduate medical education and compiling an Indian Pharmacopoeia for which separate committees had been appointed by the Government of India, as and when necessary.

Two other important factors have also to be considered, in this connection, by the Government of India and the Indian Parliament. The first factor relates to the right to prescribe drugs in the Indian Pharmacopoeia and to practise scientific medicine by unqualified and non-registered personnel. The Bhore Committee (the Health Survey and Development Committee) rightly recommended that necessary legislation should be enacted providing (1) that no *"medical practitioner"* should be entitled to affix the designation "doctor" before his name unless he is a registered medical practitioner in modern scientific medicine, (2) that no person should be entitled to prescribe drugs in the . . . . Pharmacopoeia, specially injections and poisonous preparations, unless he is a registered practitioner and (3) that those who practise Unani or Ayurvedic systems of medicine should style themselves as "Hakims" or "Vaids" as the case may be. They recommended as follows: "We consider that the public is entitled to know the

exact credentials of persons on whom they call for advice and treatment and to protection against fraudulent imposition. We suggest that legislation should be made so as to provide that no person shall be entitled to use the style or appellation of "doctor" other than those who hold the Doctor's degree of a Faculty of a University recognised by the State or are practitioners qualified to practise modern scientific medicine."

The second factor concerns the Indigenous Systems of Medicine and Homoeopathy. In April, 1952, the Medical Council of India decided that "only one system of medicine, namely the modern system, with a minimum uniform standard as prescribed by the Council should be adopted in this country. Dr. K. C. K. E. Raja, the then Director-General of Health Services, Government of India, said, in this connection, that "there are such fundamental differences in theory and practice between modern medicine, indigenous system of medicine and homoeopathy, that it would be most unsatisfactory from the point of view of the interests of attendants and of advancement of these systems to arrange for simultaneous teaching of modern medicine and of any other of these systems during the undergraduate courses in modern medicine. The course of indigenous system and of homoeopathy should therefore be prepared only as postgraduate courses of training after the intending practitioner has obtained basic qualifications in modern medicine as is the case in respect of homoeopathy in the United Kingdom, Europe and in America." The Indian Medical Association has stressed these points, time and again, to the best interests of the people themselves, It has never been the desire of anyone to stifle the progress of the indigenous systems of medicine which reached their peak of glory in the earlier phases of development of India and neighbouring countries ; but it is also to be noted, with much regret that these systems have assumed a static character particularly due to absence of research and progress in these fields during the last 700 years. The Bhore Committee's recommendations, in this respect, were as follows :—"We do, however, say quite definitely that there are certain aspects of health protection which in our opinion can be secured wholly or at any rate largely only through the scientific system of medicine. Thus, public health or preventive medicine which must play an essential part in the future of medical organisation is not within the purview of the indigenous systems of medical treatment as they obtained at present. The indigenous systems of medical treatment do not also at present deal with such vital aspects of medicine as obstetrics and gynaecology, advanced surgery and some of the specialities. Further no system of medical treatment which is static in conception and progress and does not keep pace with the discoveries and researches of scientific works the world over can help to give the best available ministration to those who seek its aid."

Before a bill is placed before the legislature for the regulation of the medical profession, it is the duty of the Ministry of Health, Government of India, to seek the advice of the Medical Council of India as well as the representatives of the Indian Medical Association which is the representative national association of the members of the medical profession, particularly in regard to stoppage of practice by quacks and the control of the indigenous system of medicine and homoeopathy in the lines suggested above. After all a bill to regulate the medical profession must be considered in all its aspects and must be provided primarily for the protection of the people.

India is a vast country composed of a large number of States with separate State Legislatures and Health Ministries with fairly wide statutory powers, vested by the Constitution of India, and in some of the States people speak in more than one language. In a multilingual sub-continent like India, the Government, the legislatures and the members of the medical profession have to seriously consider whether a single Medical Council of India would be able to take up the duties of registration of licensed medical practitioners and of maintaining their ethical standard throughout the length and breadth of the country. If, however, it be decided that a single Central Medical Council of India should be responsible for these two tasks along with the other functions of a statutory medical council, it is to be considered whether, under such circumstances, it would be of any use to continue the State Medical Councils with their very limited or nominal functions, in relation to maintenance of the ethical standard of the registered medical practitioners in the States ; or the Medical Council of India should have just its branch offices in all the States of India in place of the existing State Medical Councils. On the contrary, if it be deemed necessary to maintain and continue the State Medical Councils particularly to ensure that a proper ethical standard be maintained by the licensed medical practitioners of the State, would it not be wiser and more practicable to entrust such statutory State Medical Councils with wider powers so that such councils can carry out all the functions of statutory medical councils in the States concerned, as in Australia, Canada

and U.S.A.? The Indian Medical Council can, in that case, be converted into a co-ordinating Medical Council for co-ordination of the activities of the State Medical Councils. In any case, we fail to understand why neither the Government of India nor the Medical Council of India have thought of inclusion of elected representatives of the State Medical Councils in the Medical Council of India while the Indian Medical Council Bill, 1956, was being drafted and re-drafted during the last 4 or 5 years.

We would refer to some of the important provisions of the Indian Medical Council Bill. We are of opinion that any statutory medical authority which is allowed, by law, to maintain a register must have the inherent right of deciding which medical qualification is registrable and which is not and also of deciding which name is to be erased from the medical register on which it is borne. In the bill under discussion, it is curious that provision has been made for maintaining an All-India Medical Register by the Medical Council of India ; but the Government of India has been made the competent authority to consider the appeals from practitioners whose names might be removed, under certain circumstances, from the State Medical Registers, by the State Medical Councils. Such anomalous provisions might be responsible for unnecessary conflicts in future between the State Medical Councils, the Government of India and the Medical Council of India. We also feel that these provisions need much more careful scrutiny and reconsideration in consultation with the State Medical Councils, the Medical Council of India and the representatives of the medical profession through the Indian Medical Association. While this point is being considered, the future relation between the Medical Council of India and the State Medical Councils if the latter are allowed to continue would also have to be considered.

We would, now, consider the constitution and composition of the proposed Medical Council of India. The first category relates to nomination of "1 member from each State by the Central Government in consultation with the State Governments concerned." We fail to understand why the State Government shall not be allowed to nominate such a member directly to the Medical Council of India. The second category relates to election of one member from each university by the members of the Medical Faculty. As some of the universities have been recently formed and their Medical Faculties recently established, such Faculties consist of only a few members. As such, would it not be wiser to ask the members of the Senate of the University concerned to elect a representative of the Medical Faculty of the university? In both these categories, therefore, we suggest the continuation of the existing provisions of the Medical Council of India, under the Indian Medical Council Act 1933. The third category relates to election of one member from each State. The Indian Medical Association is of opinion that two members, of which one shall be a Medical Graduate, should be elected from each State and the medical licentiates, medical graduates and all other registered medical practitioners of that State shall form the constituency from which these two representatives shall be elected, on a joint electorate basis. The fourth category relates to election of 7 representatives of the medical licentiates to the Medical Council of India. If the Association's previous suggestion be accepted, the 4th category may be deleted altogether ; otherwise the election under this category would naturally have to be conducted on a *zonal* basis and the number of seats would have to be made proportionate to the number of voters in the zones concerned. The fifth category relates to nomination of 6 members by the Government of India.

We have already pointed out that if the State Medical Councils were allowed to continue, it was essential to add an additional category by inclusion of at least one elected representative from each State Medical Council to the Medical Council of India. The Indian Medical Association should also have at least one seat in the Medical Council of India.

The proposed Post-Graduate Medical Education Committee should have at least a bare majority of elected members. For that purpose, we would suggest that the Medical Council should elect at least 5 if not 6 representatives and the Government of India should nominate 4 or 3 other members, if such a committee consists of 9 members.

As regards the Schedules, we find that the first schedule not only contains the names of all Universities in India but also the names of Colleges of Physicians and Surgeons, Bombay, East Punjab State Medical Faculty and the State Medical Faculty of West Bengal, in respect of their membership qualifications. If these categories can be included in this schedule, the Indian Medical Association would naturally like to know why the names of *medical licentiates* cannot be included under this schedule, particularly because further production of new medical licentiates in the country has been stopped in almost all the States in India. Part 2 of the third schedule needs expansion and revision, if the list is to be comprehensive.

CURRENT MEDICAL LITERATURE

Vertebral Osteophytosis

BICK (*J. A. M. A.*, **160**: 828, 1956) writes that pathologically it is an osteogenic proliferation occurring within the vertebral ligaments at their insertions into the apophyseal rings of the vertebral bodies. The ossific masses vary in size from that of a lentil to a large double plaque crossing the intervertebral space. Pathogenically they are the characteristic reaction to strain found at the insertions of powerful ligaments into bone at many sites throughout the axial and appendicular skeleton. This phenomenon is well recognized along the iliac crests, at the femoral adductor tubercle, and at the insertion of the long plantar ligament into the calcaneus.

Vertebral osteophytosis may appear as a single lesion, as distinct lesions in several parts of the spine, or with widespread distribution involving all the segments of the vertebral column. The numerical difference in occurrence at the cervical, thoracic, or lumbar levels is statistically insignificant. In the cervical spine more than elsewhere, it is frequently, though not necessarily, associated with disk degeneration. Osteophytes are found most often in the anterior longitudinal ligaments, secondly in the lateral ligaments, and least often in the posterior ligaments.

Vertebral osteophytosis may cause painful symptoms at any stage of its development. Symptoms are apt to be recurrent with variable intensity. Pain may appear only in certain postural positions or may occur without known precipitating factors.

When vertebral osteophytosis is primary, that is, uncomplicated by associated articular or disk deterioration, or deformity of the vertebral body, symptoms are almost always self-limited and the patient is relieved by rest in a firm bed or by wearing a spinal support. At times, especially at the onset, palliative measures such as local heat, medication, or muscle-relaxing drugs may hasten relief. With decrease in intensity of symptoms, the spinal support is gradually discarded. It has become a continuing experience that, when the symptoms of vertebral osteophytosis persist or worsen under a regimen of these simple measures, other lesions should be sought even though they are not evident at the first instance.

Low Back Pain

DIVELEY AND OTHERS (*J. A. M. A.*, **160**: 729, 1956) write that the most frequent diagnosis in 3,587 cases of pain low in the back was lumbosacral strain. This accounted for 1,603 cases, of which 1,108 were associated with congenital anomalies while 495 were unexplained by roentgenoscopy.

In many of these patients the symptoms had existed for more than three years. Conservative treatment included the full resources of physical medicine, but surgery frequently became necessary. Lumbosacral fusion was carried out in 152 patients, and in 25 of these the fascia lata was also divided.

A protruded intervertebral disk was found in 83 cases; it was excised in 28 patients, and 19 became symptom-free. Sacroiliac strain or sprain was diagnosed in only 271 instances, and practically all of these diagnoses were made early in the 25 year period covered by this survey.

Psychosis in Surgical Patients

TITCHENER AND OTHERS (*Surg. Obst. & Gynec.*, **102**: 59, 1956) observe:

Psychosis was a finding in 44 of 200 surgical patients (22 per cent) constituting a representative sample of 3,656 patients admitted to the surgical wards of the Cincinnati General Hospital during the year 1953 to 1954.

An acute brain syndrome or delirium was often the first sign of impending relapse in the general medical condition of the patients. A delirium was frequently the first sign of continuing mental deterioration, leading in elderly patients to a chronic brain syndrome or some lesser defect in mentation. These findings indicate the need for early recognition and prompt treatment of even the subtle signs of delirium.

Aging patients who lost the closeness and support of family, friends, or visitors developed an organic psychosis, in response to the stress of illness and surgery more often than those who retained close family contacts.

Elderly men and women immobilized for treatment of hip fractures were prone to mental deterioration, in contrast to patients with hip fracture who were allowed early ambulation. A similar liability to psychotic break appeared among elderly patients undergoing amputation of an extremity.

Psychotic depressive reactions represented the major functional psychosis occurring in the series of patients under review after admission to the hospital. The majority of these reactions occurred in cancer patients when the commonly found inner sense of abandonment and guilty isolation was reinforced by realistic factors in their environment. It is postulated that impotent rage and ensuing guilt, against the environment because of actual or marginal awareness of the cancer, may enhance the development of the depressive reaction.

The concept of "postoperative psychosis" as a distinct aetiologic and nosologic entity is not supported by the data.—(Authors' summary).

Headache and Eye Pain in a Group of School Children

HUGHS AND COOPER (*Brit. M. J.*, **1**: 1138, 1956) from an analysis of the records of 189 cases of headache and eye pain describe the finding of a small tender area or trigger point about 1 inch down the posterior border of the sternomastoid muscle, over the tip of first cervical transverse process, pressure on which reproduced the headache of eye pain in 47 out of 189 cases. In 38 other children with headache the point was tender but the pains could not be reproduced. The authors obtained good results by relaxation exercise to the head and neck. They, however, maintain that the region of the basiocciput seems to have received little investigation. Palpation of it and of the adjoining neck muscles and cervical spine does not usually form part of a routine examination. The region in the opinion of the authors merits systemic examination so that one may know

more of its contribution to and connection with the genesis of headache in childhood.

Epilepsy of Late Onset

DIMSDALE (*Brit. M. J.*, **1**: 1214, 1956) from an analysis of 200 cases of epilepsy (starting over the age of 20, excluding traumatic cases and those with papilloedema) with an attempt to assess which investigations are indicated to detect the causal lesion observes:

The C.S.F. findings have not been considered.

A group of 100 cases, after clinical evaluation and straight x-ray examination, were investigated by pneumoencephalography.

The investigations employed in the second group of 100 cases were E.E.G. (100 per cent), pneumography (88 per cent), and angiography (68 per cent).

The diagnoses showed a close similarity in the two groups.

Contrast radiography might be negative in the presence of a tumour which produced a focal abnormality in the E.E.G.

Pneumoencephalography was slightly more reliable than angiography in detecting tumours at an early stage, and demonstrated cerebral atrophy. Angiomatous malformations were an uncommon cause of epilepsy, and the presence of their characteristic clinical features indicated the need for angiography.

It is concluded that after clinical and straight x-ray examinations electroencephalography with pneumoencephalography is a suitable combination of techniques for the investigation of epilepsy of late onset, unless frank lateralizing signs or a bruit are present, when angiography is preferable.

Acetazolamide (Diamox) in Epilepsy

LOMBROSO AND OTHERS (*J. A. M. A.*, **160**: 268, 1956) in reporting on further evaluation of acetazolamide (Diamox) in the treatment of epilepsy observe:

Acetazolamide (Diamox), an inhibitor of carbonic anhydrase, has been given to 126 epileptic patients. Treatment extended for periods of from three months to three years. In 37 per cent seizures were reduced by at least 90 per cent, in 17 per cent they were reduced 50 to 90 per cent, and in 46 per cent they were reduced by 50 per cent or less. None were made worse, nor was any serious side-effect or abnormality of blood, urine, or bone encountered. The degree of improvement was not related significantly either to a personal history of brain damage, a family history of epilepsy, or the type of seizure. Benefit was greatest for patients having 3 per second spike-wave discharges or the electroencephalogram. Maximum benefit occurred if the alkalosis induced by hyperventilation of the lungs resulted in maximal increase of spike-wave discharges and of "buildup" in the record. In some patients, well controlled for at least three months with therapy, seizures later returned. Reinstitution of therapy with the drug later often reproduced the initial favourable response. The beneficial effect on seizures may be a result of the acidosis or the dehydration induced or of inhibition of enzyme action in the neurones. Acetazolamide should prove useful not only as an adjuvant in the therapy of epilepsy but also as a means for further investigation of the role of acidosis and of carbonic anhydrase in the metabolism of normal and abnormal brain tissue.

Acetazolamide in Epilepsy

ANSELL AND CLARKE (*Brit. M. J.*, **1**: 650, 1956) write:

Acetazolamide (Diamox) may be of value as the sole therapeutic agent in the treatment of major epilepsy of moderate severity in some cases of minimal epilepsy, and as adjuvant therapy in mixed idiopathic epilepsy.

Repeated increase of dosage is often necessary, but as the drug is relatively non-toxic it can be used in doses up to 20 mg. per kg. of body weight.

Its mode of action is unknown. In continued dosage it does not appear to depend upon the production of a systemic acidosis, or on its diuretic effect. Given at the time of the menses, its beneficial influence in some epileptics may, however, be related to the diuresis. A suggestion is made that it may act specifically on the carbonic anhydrase in the epileptic brain.

Malaria Therapy in Nephrotic Syndrome

GILBERSTSEN AND BASHOUR (*J. A. M. A.*, **160**: 25, 1956) write that malaria therapy was employed in six patients with the nephrotic syndrome. Hypertension was present in four patients and hypertension and azotaemia in one. Two patients obtained complete clinical and chemical remissions and have been followed one year and six months without relapse. One patient had a good clinical remission, but the chemical remission was incomplete; this patient relapsed three and one-half months later. A fourth patient had just completed treatment and has obtained a good clinical response. The one patient with uramia did not respond to malaria therapy. One patient did not develop malaria after three inoculations. In the cases studied, malaria effected profound water and sodium diureses, loss of oedema, decrease or disappearance of proteinuria, increase in serum albumin, decrease in serum cholesterol, improved renal function, and relief of hypertension. The mechanism of action is unknown. Fever therapy produced with an easily controlled agent such as *Plasmodium vivax* is an effective method of treatment in the nephrotic syndrome and is particularly valuable in those patients with hypertension who are unsuitable candidates for steroid therapy. Uraemia probably constitutes a contraindication to malaria therapy.

Relation of Pectus Excavatum to Heart Disease

WACHTEL AND OTHERS (*Am. Heart Dis.*, **52**: 121, 1956) give in the following lines the summary of their observations on the relation of pectus excavatum (funnel chest) to heart disease:

Pectus excavatum is a congenital thoracic deformity which, in moderate and severe cases, may result in profound disturbances of cardiorespiratory physiology.

The radiographs of the chest in this condition indicate cardiac displacement, impingement, and rotation.

The electrocardiographic and vectorcardiographic findings are the result of cardiac rotation and do not reveal

any evidence of intraventricular conduction defect or myocardial damage. The rSr' or rSR' pattern observed in V_1 is a variation of normal and does not indicate incomplete right bundle branch block.

Cardiac catheterization in one of the symptomatic adults was of a great interest in that a normal cardiac output was observed at rest. After ten minutes of standard exercise, a definite fall in cardiac output was recorded, with only a minimal rise in pulmonary artery pressure.

The mechanisms responsible for cardiac disability in this condition are thought to result from

(a) a decreased return of blood to the right heart.

(b) cardiac arrhythmias secondary to atrial impingement.

(c) restriction of expansion of heart, and

(d) a decrease in respiratory reserve.

This deformity can be corrected satisfactorily by operation with good physiologic and cosmetic results.

CURRENT TOPIC

THE INDIAN MEDICAL COUNCIL BILL, 1956

(Bill No. VIII-C of 1956)

(AS PASSED BY THE RAJYA SABHA)

A Bill to provide for the reconstitution of the Medical Council of India, and the maintenance of a Medical Register for India and for matters connected therewith.

Be it enacted by Parliament in the Seventh Year of the Republic of India as follows :—

SHORT TITLE, EXTENT AND COMMENCEMENT

1. (*1*) This Act may be called the Indian Medical Council Act, 1956.

(*2*) It extends to the whole of India except the State of Jammu and Kashmir.

(*3*) It shall come into force on such date as the Central Government may, by notification in the Official Gazette, appoint.

DEFINITIONS

2. In this Act, unless the context otherwise requires,—

(*a*) "approved institution" means a hospital, health centre or other such institution recognised by a University as an institution in which a person may undergo the training, if any, required by his course of study before the award of any medical qualification to him;

(*b*) "Council" means the Medical Council of India constituted under this Act;

(*c*) "India" means the territories comprised in the States to which this Act extends;

(*d*) "Indian Medical Register" means the medical register maintained by the Council;

(*e*) "medical institution" means any institution, within or without India, which grants degrees, diplomas or licences in medicine;

(*f*) "medicine" means modern scientific medicine in all its branches and includes surgery and obstetrics, but does not include veterinary medicine and surgery;

(*g*) "prescribed" means prescribed by regulations;

(*h*) "recognised medical qualification" means any of the medical qualifications included in the Schedules;

(*i*) "regulation" means a regulation made under section 33;

(*j*) "State Medical Council" means a medical council constituted under any law for the time being in force in any State regulating the registration of practitioners of medicine;

(*k*) "State Medical Register" means a register maintained under any law for the time being in force in any State regulating the registration of practitioners of medicine;

(*l*) "University" means any University in India established by law and having a medical faculty.

CONSTITUTION AND COMPOSITION OF THE COUNCIL

3. (*1*) The Central Government shall cause to be constituted a Council consisting of the following members, namely :—

(a) one member from each State to be nominated by the Central Government in consultation with the State Government concerned;

(b) one member from each University to be elected by the members of the medical faculty of that University from amongst themselves;

(c) one member from each State in which a State Medical Register is maintained, to be elected from amongst themselves by persons enrolled on such Register who possess the medical qualifications included in the First or Second Schedule or in Part II of the Third Schedule;

(d) seven members to be elected from amongst themselves by persons enrolled on any of the State Medical Registers who possess the medical qualifications included in Part I of the Third Schedule;

(e) six members to be nominated by the Central Government :

Provided that clause (c) shall have effect in any State where a Medical Register is not maintained, as if for the words "in which a State Medical Register is maintained, to be elected from amongst themselves by persons enrolled on such Register", the words "to be nominated by the State Government from amongst persons" had been substituted; and pending the preparation of the Indian Medical Register in accordance with the provisions of this Act, clause (d) shall have effect as if for the words "to be elected from amongst themselves by persons", the words "to be nominated by the Central Government from amongst persons" had been substituted.

(2) The Chairman and Vice-Chairman of the Council shall be elected by the members of the Council from amongst themselves.

(3) No act done by the Council shall be questioned on the ground merely of the existence of any vacancy in, or any defect in the constitution of, the Council.

MODE OF ELECTION

4. (1) An election under clause (*b*), clause (*c*) or clause (*d*) of sub-section (1) of section 3 shall be conducted by the Central Government in such manner as it may think fit.

(2) Where any dispute arises regarding any election to the Council, it shall be referred to the Central Government whose decision shall be final.

RESTRICTIONS ON NOMINATION AND MEMBERSHIP

5. (1) No person shall be eligible for nomination under clause (*a*) of sub-section (1) of section 3 unless he possesses any of the medical qualifications included in the First and Second Schedules, resides in the State concerned, and, where a State Medical Register is maintained in that State, is enrolled on that register.

(2) No person may at the same time serve as a member in more than one capacity.

INCORPORATION OF THE COUNCIL

6. The Council so constituted shall be a body corporate by the name of the Medical Council of India, having perpetual succession and a common seal, with power to acquire and hold property, both movable and immovable, and to contract, and shall by the said name sue and be sued.

TERM OF OFFICE OF CHAIRMAN, VICE-CHAIRMAN AND MEMBERS

7. (1) The Chairman or Vice-Chairman of the Council shall hold office for a term not exceeding five years and not extending beyond the expiry of his term as member of the Council.

(2) Subject to the provisions of this section, a member shall hold office for a term of five years from the date of his nomination or election or until his successor shall have been duly nominated or elected, whichever is longer.

(3) An elected or nominated member shall be deemed to have vacated his seat if he is absent without excuse, sufficient in the opinion of the Council, from three consecutive ordinary meetings of the Council or, in the case of a member elected under clause (*b*) of sub-section (1) of section 3, if he ceases to be a member of the medical faculty of the University concerned, or in the case of a member elected under clause (*c*) or clause (*d*) of that sub-section, if he ceases to be a person enrolled on the State Medical Register concerned.

(4) A casual vacancy in the Council shall be filled by nomination or election, as the case may be, and the person nominated or elected to fill the vacancy shall hold office only for the remainder of the term for which the member whose place he takes was nominated or elected.

(5) Members of the Council shall be eligible for re-nomination or re-election.

(6) Where the said term of five years is about to expire in respect of any member, a successor may be nominated or elected at any time within three months before the said term expires but he shall not assume office until the said term has expired.

MEETINGS OF THE COUNCIL

8. (1) The Council shall meet at least once in each year at such time and place as may be appointed by the Council.

(2) Unless otherwise provided by regulations, fifteen members of the Council shall form a quorum, and all the acts of the Council shall be decided by a majority of the members present and voting.

OFFICERS, COMMITTEES AND SERVANTS OF THE COUNCIL

9. The Council shall—

(1) constitute from amongst its members an Executive Committee and such other Committees for general or special purposes as the Council deems necessary to carry out the purposes of this Act;

(2) appoint a Registrar who shall act as Secretary and who may also, if deemed expedient, act as Treasurer;

(3) employ such other persons as the Council deems necessary to carry out the purposes of this Act;

(4) require and take from the Registrar, or from any other employee, such security for the due performance of his duties as the Council deems necessary; and

(5) with the previous sanction of the Central Government, fix the remuneration and allowances to be paid to the Chairman, Vice-Chairman and members of the Council and determine the conditions of service of the employees of the Council.

THE EXECUTIVE COMMITTEE

10. (1) The Executive Committee, hereinafter referred to as the Committee, shall consist of the Chairman and Vice-Chairman, who shall be members *ex officio*, and not less than seven and not more than ten other members who shall be elected by the Council from amongst its members.

(2) The Chairman and Vice-Chairman shall be the Chairman and Vice-Chairman respectively of the Committee.

(3) In addition to the powers and duties conferred and imposed upon it by this Act, the Committee shall exercise and discharge such powers and duties as the Council may confer or impose upon it by any regulations which may be made in this behalf.

RECOGNITION OF MEDICAL QUALIFICATIONS GRANTED BY UNIVERSITIES OR MEDICAL INSTITUTIONS IN INDIA

11. (1) The medical qualifications granted by any University or medical institution in India which are in-

cluded in the First Schedule shall be recognised medical qualifications for the purposes of this Act.

(2) Any University or medical institution in India which grants a medical qualification not included in the First Schedule may apply to the Central Government to have such qualification recognised, and the Central Government, after consulting the Council, may, by notification in the Official Gazette, amend the First Schedule so as to include such qualification therein, and any such notification may also direct that an entry shall be made in the last column of the First Schedule against such medical qualification declaring that it shall be a recognised medical qualification only when granted after a specified date.

RECOGNITION OF MEDICAL QUALIFICATIONS GRANTED BY MEDICAL INSTITUTIONS IN COUNTRIES WITH WHICH THERE IS A SCHEME OF RECIPROCITY

12. (1) The medical qualifications granted by medical institutions outside India which are included in the Second Schedule shall be recognised medical qualifications for the purposes of this Act.

(2) The Council may apply to, or may enter into negotiations with, the Authority in any State or country outside India which by the law of such State or country is entrusted with the maintenance of a register of medical practitioners, for the settling of a scheme of reciprocity for the recognition of medical qualifications, and in pursuance of any such scheme, the Central Government may, by notification in the Official Gazette, amend the Second Schedule so as to include therein the medical qualification which the Council has decided should be recognised, and any such notification may also direct that an entry shall be made in the last column of the Second Schedule against such medical qualification declaring that it shall be a recognised medical qualification only when granted after a specified date.

(3) The Central Government, after consultation with the Council, may, by notification in the Official Gazette, amend the Second Schedule by directing that an entry be made therein in respect of any medical qualification declaring that it shall be a recognised medical qualification only when granted before a specified date.

(4) Where the Council has refused to recommend any medical qualification which has been proposed for recognition by any Authority referred to in sub-section (2) and that Authority applies to the Central Government in this behalf, the Central Government, after considering such application and after obtaining from the Council a report, if any, as to the reasons for any such refusal, may, by notification in the Official Gazette, amend the Second Schedule so as to include such qualification therein and the provisions of sub-section (2) shall apply to such notification.

RECOGNITION OF MEDICAL QUALIFICATIONS GRANTED BY CERTAIN MEDICAL INSTITUTIONS WHOSE QUALIFICATIONS ARE NOT INCLUDED IN THE FIRST OR SECOND SCHEDULE

13. (1) The medical qualifications granted by medical institutions in India which are not included in the First Schedule and which are included in Part I of the Third Schedule shall also be recognised medical qualifications for the purposes of this Act.

(2) The medical qualifications granted to a citizen of India—

(a) before the 15th day of August, 1947, by medical institutions in the territories now forming part of Pakistan, and

(b) before the 1st day of April, 1937, by medical institutions in the territories now forming part of Burma,

which are included in Part I of the Third Schedule shall also be recognised medical qualifications for the purposes of this Act.

(3) The medical qualifications granted by medical institutions outside India which are not included in the Second Schedule and which are included in Part II of the Third Schedule shall also be recognised medical qualifications for the purposes of this Act but only if held by a citizen of India.

(4) The Central Government, after consulting the Council, may by notification in the Official Gazette, amend Part II of the Third Schedule so as to include therein any qualification granted by a medical institution outside India which is not included in the Second Schedule.

(5) Any medical institution in India which is desirous of getting a medical qualification granted by it included in Part I of the Third Schedule may apply to the Central Government to have such qualification recognised and the Central Government, after consulting the Council, may, by notification in the Official Gazette, amend Part I of the Third Schedule so as to include such qualification therein, and any such notification may also direct that an entry shall be made in the last column of Part I of the Third Schedule against such medical qualification declaring that it shall be a recognised medical qualification only when granted after a specified date.

SPECIAL PROVISION IN CERTAIN CASES FOR RECOGNITION OF MEDICAL QUALIFICATIONS GRANTED BY MEDICAL INSTITUTIONS IN COUNTRIES WITH WHICH THERE IS NO SCHEME OF RECIPROCITY

14. (1) The Central Government may, by notification in the Official Gazette, direct that medical qualifications granted by medical institutions in any State or country outside India in respect of which a scheme of reciprocity for the recognition of medical qualifications is not in force, shall be recognised medical qualifications for the purposes of this Act or shall be so only when granted after a specified date:

Provided that medical practice by the doctors possessing such qualifications shall be limited to the institution to which they are attached for the time being for purposes of teaching, research or charitable work and for so long as they continue to do such work.

(2) In respect of any such medical qualification, the Central Government, after consultation with the Council, may, by notification in the Official Gazette, direct

that it shall be recognised medical qualification only when granted before a specified date.

RIGHT OF PERSONS POSSESSING QUALIFICATIONS IN THE SCHEDULES TO BE ENROLLED

15. Subject to the other provisions contained in this Act, the medical qualifications included in the Schedules shall be sufficient qualification for enrolment on any State Medical Register.

POWER TO REQUIRE INFORMATION AS TO COURSES OF STUDY AND EXAMINATIONS

16. Every University or medical institution in India which grants a recognised medical qualification shall furnish such information as the Council may, from time to time, require as to the courses of study and examinations to be undergone in order to obtain such qualification, as to the ages at which such courses of study and examinations are required to be undergone and such qualification is conferred and generally as to the requisites for obtaining such qualification.

INSPECTION OF EXAMINATIONS

17. (*1*) The Committee shall appoint such number of medical inspectors as it may deem requisite to attend at any or all of the examinations held by Universities or medical institutions in India for the purpose of recommending to the Central Government recognition of medical qualifications.

(*2*) Inspectors appointed under this section shall not interfere with the conduct of any examination but they shall report to the Committee on the sufficiency of every examination which they attend and on any other matters in regard to which the Committee may require them to report.

(*3*) The Committee shall forward a copy of any such report to the University or medical institution concerned, and shall also forward a copy with the remarks of the University or institution thereon, to the Central Government.

VISITORS AT EXAMINATIONS

18. (*1*) The Council may appoint such number of visitors as it may deem requisite to attend at any or all of the examinations held by Universities or medical institutions in India for the purpose of granting recognised medical qualifications.

(*2*) Any person, whether he is a member of the Council or not, may be appointed as a visitor under this section but a person who is appointed as an inspector under section 17 for any examination shall not be appointed as a visitor for the same examination.

(*3*) Visitors appointed under this section shall not interfere with the conduct of any examination but they shall report to the Chairman of the Council on the sufficiency of every examination which they attend and on any other matters in regard to which the Council may require them to report.

(*4*) The report of a visitor shall be treated as confidential unless in any particular case the Chairman of the Council otherwise directs :

Provided that if the Central Government requires a copy of the report of a visitor, the Council shall furnish the same.

WITHDRAWAL OF RECOGNITION

19. (*1*) When upon report by the Committee or by a visitor appointed under section 18, it appears to the Council that the courses of study and examination to be undergone in any University or medical institution in India in order to obtain a recognised medical qualification or that the standards of proficiency required from candidates at any examination held for the purpose of granting such qualification are not such as to secure to persons holding such qualification the knowledge and skill requisite for the efficient practice of medicine, the Council shall make a representation to that effect to the Central Government.

(*2*) After considering such representation, the Central Government may send it to the State Government of the State in which the University or medical institution is situated and the State Government shall forward it along with such remarks as it may choose to make to the University or medical institution, with an intimation of the period within which the University or medical institution may submit its explanation to the State Government.

(*3*) On the receipt of the explanation or, where no explanation is submitted within the period fixed, then on the expiry of that period, the State Government shall make its recommendations to the Central Government.

(*4*) The Central Government, after making such further inquiry, if any, as it may think fit, may, by notification in the Official Gazette, direct that an entry shall be made in the appropriate Schedule against the said medical qualification declaring that it shall be a recognised medical qualification only when granted before a specified date.

POST-GRADUATE MEDICAL EDUCATION COMMITTEE FOR ASSISTING COUNCIL IN MATTERS RELATING TO POST-GRADUATE MEDICAL EDUCATION

20. (*1*) The Council may prescribe standards of post-graduate medical education for the guidance of Universities, and may advise Universities in the matter of securing uniform standards for post-graduate medical eduction throughout India, and for this purpose the Central Government may constitute from among the members of the Council a Post-graduate Medical Education Committee (hereinafter referred to as the Post-graduate Committee).

(*2*) The Post-graduate Committee shall consist of nine members all of whom shall be persons possessing post-graduate medical qualifications and experience of teaching and examining post-graduate students of medicine.

(*3*) Six of the members of the Post-graduate Committee shall be nominated by the Central Government

and the remaining three members shall be elected by the Council from amongst its members.

(4) For the purpose of considering Post-graduate studies in a subject, the Post-graduate Committee may co-opt, as and when necessary, one or more members qualified to assist it in that subject.

(5) The views and recommendations of the Post-graduate Committee on all matters shall be placed before the Council ; and if the Council does not agree with the views expressed or the recommendations made by the Post-graduate Committee on any matter, the Council shall forward them together with its observations to the Central Government for decision.

THE INDIAN MEDICAL REGISTER

21. (1) The Council shall cause to be maintained in the prescribed manner a register of medical practitioners to be known as the Indian Medical Register, which shall contain the names of all persons who are for the time being enrolled on any State Medical Register and who possess any of the recognised medical qualifications.

(2) It shall be the duty of the Registrar of the Council to keep the Indian Medical Register in accordance with the provisions of this Act and of any orders made by the Council, and from time to time to revise the register and publish it in the Gazette of India and in such other manner as may be prescribed.

(3) Such register shall be deemed to be a public document within the meaning of the Indian Evidence Act, 1872† and may be proved by a copy published in the Gazette of India.

SUPPLY OF COPIES OF THE STATE MEDICAL REGISTERS

22. Each State Medical Council shall supply to the Council three printed copies of the State Medical Register as soon as may be after the commencement of this Act and subsequently after the first day of April of each year, and each Registrar of a State Medical Council shall inform the Council without delay of all additions to and other amendments in the State Medical Register made from time to time.

REGISTRATION IN THE INDIAN MEDICAL REGISTER

23. The Registrar of the Council may, on receipt of the report of registration of a person in a State Medical Register or on application made in the prescribed manner by any such person, enter his name in the Indian Medical Register :

Provided that the Registrar is satisfied that the person concerned possesses a recognised medical qualification.

REMOVAL OF NAMES FROM THE INDIAN MEDICAL REGISTER

24. (1) If the name of any person enrolled on a State Medical Register is removed therefrom in pursuance of any power conferred by or under any law relating to registration of medical practitioners for the time being in force in any State, the Council shall direct the removal of the name of such person from the Indian Medical Register.

(2) Where the name of any person has been removed from a State Medical Register on any ground other than that he is not possessed of the requisite medical qualifications or where any application made by the said person for restoration of his name to the State Medical Register has been rejected, he may appeal in the prescribed manner and subject to such conditions including conditions as to the payment of a fee as may be laid down in rules made by the Central Government in this behalf, to the Central Government, whose decision, which shall be given after consulting the Council, shall be binding on the State Government and on the authorities concerned with the preparation of the State Medical Register.

PROVISIONAL REGISTRATION FOR CLINICAL PRACTICE

25. If the courses of study to be undergone for obtaining a recognised medical qualification include a period of training after a person has passed the qualifying examination and before such qualification is conferred on him, any such person shall, on application made by him in this behalf, be granted provisional registration in a State Medical Register by the State Medical Council concerned in order to enable him to practise medicine in an approved institution for the period aforesaid.

REGISTRATION OF ADDITIONAL QUALIFICATIONS

26. (1) If any person whose name is entered in the Indian Medical Register obtains any title, diploma or other qualification for proficiency in sanitary science, public health or medicine, which is a recognised medical qualification, he shall, on application made in this behalf in the prescribed manner, be entitled to have an entry stating such other title, diploma, or other qualification made against his name in the Indian Medical Register either in substitution for or in addition to any entry previously made.

(2) The entries in respect of any such person in a State Medical Register shall be altered in accordance with the alterations made in the Indian Medical Register.

PRIVILEGES OF PERSONS WHO ARE ENROLLED ON THE INDIAN MEDICAL REGISTER

27. Subject to the conditions and restrictions laid down in this Act regarding medical practice by persons possessing certain recognised medical qualifications, every person whose name is for the time being borne on the Indian Medical Register shall be entitled according to his qualifications to practise as a medical practitioner in any part of India and to recover in due course of law in respect of such practice any expenses, charges in respect of medicaments or other appliances, or any fees to which he may be entitled.

† 1 of 1872.

From down & out to up & about...

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DUROL is an oral tonic developed after extensive scientific research, incorporating in one formula all the nutritional factors often found to be wanting in tropical diets. The absence of these nutritional factors leads to conditions of lowered vitality, lack of stamina, general feeling of fatigue, etc., which tend to increase susceptibility to disease. Many of these symptoms are confusing and a clinical diagnosis is not possible until definite diseases like anaemia, neurasthenia, cachexia, chlorosis, etc., occur.

DUROL is an ideal combination of the essential factors which are most effective in restorative and prophylactic action in such conditions.

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Each fluid ounce of Durol contains approximately:—

Liver Extract 1:20	2.0 gm.
Thiamine hydrochloride . . .	50.0 mg.
Calcium glycerophosphate . .	120.0 mg.
Potassium glycerophosphate .	240.0 mg.
Sodium glycerophosphate . .	800.0 mg.
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Folic Acid & B_{12}, Vit. C & Iron...

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Stomach powder	10 mg.
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Panthenol	1 mg.
Folic Acid	1 mg.
Vitamin B_{12}	2·5 mcg.
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PERSON ENROLLED ON THE INDIAN MEDICAL REGISTER TO NOTIFY CHANGE OF PLACE OF RESIDENCE OR PRACTICE

28. Every person registered in the Indian Medical Register shall notify any transfer of the place of his residence or practice to the Council and to the State Medical Council concerned, within thirty days of such transfer, failing which his right to participate in the election of members to the Council or a State Medical Council shall be liable to be forfeited by order of the Central Government either permanently or for such period as may be specified therein.

INFORMATION TO BE FURNISHED BY THE COUNCIL AND PUBLICATION THEREOF

29. (*1*) The Council shall furnish such reports, copies of its minutes, abstracts of its accounts, and other information to the Central Government as that Government may require.

(*2*) The Central Government may publish in such manner as it may think fit, any report, copy, abstract or other information furnished to it under this section or under sections 17 and 18.

COMMISSIONS OF ENQUIRY

30. (*1*) Whenever it is made to appear to the Central Government that the Council is not complying with any of the provisions of this Act, the Central Government may refer the particulars of the complaint to a Commission of Inquiry consisting of three persons, two of whom shall be appointed by the Central Government, one being a Judge of a High Court, and one by the Council, and such Commission shall proceed to inquire in a summary manner and to report to the Central Government as to the truth of the matters charged in the complaint, and in case of any charge of default or of improper action being found by the Commission to have been established, the Commission shall recommend the remedies, if any, which are in its opinion necessary.

(*2*) The Central Government may require the Council to adopt the remedies so recommended within such time as, having regard to the report of the Commission, it may think fit, and if the Council fails to comply with any such requirement, the Central Government may amend the regulations of the Council, or make such provision or order or take such other steps as may seem necessary to give effect to the recommendations of the Commission.

(*3*) A Commission of Inquiry shall have power to administer oaths, to enforce the attendance of witnesses and the production of documents, and shall have all such other necessary powers for the purpose of any inquiry conducted by it as are exercised by a civil court under the Code of Civil Procedure, 1908†.

† 5 of 1908.

PROTECTION OF ACTION TAKEN IN GOOD FAITH

31. No suit, prosecution or other legal proceeding shall lie against the Government, the Council or a State Medical Council or any Committees thereof, or any officer or servant of the Government or Councils aforesaid for anything which is in good faith done or intended to be done under this Act.

POWER TO MAKE RULES

32. (*1*) The Central Government may, by notification in the Official Gazette, make rules to carry out the purposes of this Act.

(*2*) All rules made under this section shall be laid for not less than thirty days before both Houses of Parliament as soon as possible after they are made, and shall be subject to such modifications as Parliament may make during the session in which they are so laid or the session immediately following.

POWER TO MAKE REGULATIONS

33. The Council may, with the previous sanction of the Central Government, make regulations generally to carry out the purposes of this Act, and, without prejudice to the generality of this power, such regulations may provide for—

(*a*) the management of the property of the Council and the maintenance and audit of its accounts;

(*b*) the summoning and holding of meetings of the Council, the times and places where such meetings are to be held, the conduct of business thereat and the number of members necessary to constitute a quorum;

(*c*) the resignation of members of the Council;

(*d*) the powers and duties of the Chairman and Vice-Chairman;

(*e*) the mode of appointment of the Executive Committee and other Committees, the summoning and holding of meetings, and the conduct of business of such Committees;

(*f*) the tenure of office, and the powers and duties of the Registrar and other officers and servants of the Council;

(*g*) the particulars to be stated, and the proof of qualifications to be given in applications for registration under this Act;

(*h*) the fees to be paid on applications and appeals under this Act;

(*i*) the appointment, powers, duties and procedure of medical inspectors and visitors; and

(*j*) any matter for which under this Act provision may be made by regulations.

REPEAL OF ACT 27 OF 1933

34. The Indian Medical Council Act, 1933†, is hereby repealed.

† 27 of 1933.

THE FIRST SCHEDULE

(*See* section 11)

RECOGNISED MEDICAL QUALIFICATIONS GRANTED BY UNIVERSITIES OR MEDICAL INSTITUTIONS IN INDIA

University or Medical Institution	Recognised medical qualification	Abbreviation for registration
University of Allahabad ...	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., All.
University of Bombay	Licentiate in Medicine and Surgery ...	L.M.S., Bom.
	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Bom.
	Doctor of Medicine	M.D., Bom.
	Master of Surgery	M.S., Bom.
University of Calcutta	Licentiate in Medicine and Surgery ...	L.M.S., Cal.
	Bachelor of Medicine	M.B., Cal.
	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Cal.
	Doctor of Medicine	M.D., Cal.
	Master of Surgery	M.S., Cal.
	Master of Obstetrics	M.O., Cal.
University of Lucknow	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Lucknow.
	Doctor of Medicine	M.D., Lucknow.
	Master of Surgery	M.S., Lucknow.
University of Madras	Licentiate in Medicine and Surgery ...	L.M.S., Mad.
	Bachelor of Medicine and Master of Surgery	M.B., C.M., Mad.
	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Mad.
	Doctor of Medicine	M.D., Mad.
	Master of Surgery	M.S., Mad.
Patna University	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Patna.
	Doctor of Medicine	M.D., Patna.
	Master of Surgery	M.S., Patna.
Andhra University	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Andhra.
	Doctor of Medicine	M.D., Andhra.
	Master of Surgery	M.S., Andhra.
	Licentiate in Medicine and Surgery ...	L.M.S., Andhra.
College of Physicians and Surgeons, Bombay.	Membership of College of Physicians and Surgeons, Bombay.	M.C.P.S. (Bombay). This shall be a recognised medical qualification only when granted after the 30th April, 1944.
	Fellowship of College of Physicians and Surgeons, Bombay, in Medicine, Pathology, Surgery or Dermatology.	F.C.P.S. (Med.) (Bom.) F.C.P.S. (Path.) (Bom.) F.C.P.S. (Surg.) (Bom.) F.C.P.S. (Derm.) (Bom.) These qualifications shall be recognised medical qualifications only when granted after the 1st April, 1954.
University of Agra	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Agra.
University of East Punjab ...	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., E. Punjab.
East Punjab State Medical Faculty.	Licentiate in Medicine and Surgery ...	L.M.S., East Punjab. This qualification shall be a recognised one only when granted on or after the 15th August, 1947, provided the holders thereof had passed the F.Sc. examination before taking up medical studies.

THE FIRST SCHEDULE—*Contd.*

University or Medical Institution	Recognised medical qualification	Abbreviation for registration
University of Delhi	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S., Delhi.
Gauhati University	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S. (Gauhati). This qualification shall be a recognised medical qualification only when granted after the 20th May, 1952.
State Medical Faculty of West Bengal.	Membership of the State Medical Faculty of West Bengal	M.M.F. (West Bengal).
University of Bihar	Bachelor of Medicine and Bachelor of Surgery	M.B., B.S. (Bihar).
University of Poona	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Poona).
Utkal University	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Utkal).
Gujarat University	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Gujarat).
Nagpur University	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Nagpur).
Osmania University	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Osmania).
University of Mysore	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Mysore). This qualification shall be a recognised qualification only when granted after the 31st December, 1932.
University of Rajputana ...	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Rajputana).
University of Baroda	Bachelor of Medicine and Bachelor of Surgery	M.B.B.S. (Baroda). This shall be a recognised medical qualification only when granted after the 1st April, 1954.

THE SECOND SCHEDULE

(*See* section 12)

RECOGNISED MEDICAL QUALIFICATIONS GRANTED BY MEDICAL INSTITUTIONS OUTSIDE INDIA

Country	Qualifications
United Kingdom	Registrable qualifications admitting primarily to the Medical Register granted by licensing bodies in the United Kingdom, as shown in Table 'B' set out in the Medical Register printed and published from time to time under the direction of the General Medical Council of the United Kingdom in pursuance of the Medical Acts, 1858, 1886 and 1950.

Other Countries	Title	Registrable qualifications	
		Nature of qualifications as stated in diplomas	Abbreviations
1	2	3	4
AUSTRALIA—			
New South Wales—			
University of Sydney	M.B.	Medicine and Surgery.	U. Sydney.
(*c*)	M.D.		
	Ch. M.B.S.		

THE SECOND SCHEDULE—*Contd.*

Other Countries	Title	Registrable qualifications	
		Nature of qualifications as stated in diplomas	Abbreviations
1	2	3	4
South Australia—			
University of Adelaide ... ... (*a*) (*c*)	M.B., B.S. M.D. M.S.	Do.	U. Adelaide.
Victoria—			
University of Melbourne ... (*b*)	M.B. M.D., B.S. M.S.	Do.	U. Melbourne.
BURMA—			
University of Rangoon	M.B., B.S.	Do.	U. Rangoon.
CANADA—			
Alberta—			
College of Physicians and Surgeons of the Province of Alberta (*b*) ...	Member	Do.	C.P. and S. Alta.
University of Alberta (*b*) ...	M.D.	Do.	U. Alberta.
Manitoba—			
College of Physicians and Surgeons of the Province of Manitoba (*b*)	Member	Do.	C.P. & S. Man.
University of Manitoba (*c*) ...	M.D., M.D., C.M.	Medicine and Surgery.	U. Man.
North West Territories—			
College of Physicians and Surgeons of the Province of North-West Territories (*b*) ... ... (When held in conjunction with License of the College of Physicians and Surgeons of the Province of Saskatchewan or the Province of Alberta).	Member	Do.	C.P. & S.N.W. Terr.
Nova Scotia—			
Nova Scotia Provincial Medical Board (*a*) (*c*)	L.M.S.	Do.	N. Scotia P.M. Bd.
Dalhousie University (*a*) (*c*) ...	M.D., C.M.	Do.	Dalhousie U.
Prince Edward Island—			
Prince Edward Island Medical Council (*b*)	L.M.S.	Do.	M. Co. P.E.I.
CEYLON—			
Ceylon Medical College (*a*) (*c*) ...	L.M.S.	Do.	Ceylon M. Co.
HONG KONG—			
University of Hong Kong (*a*) (*c*)	M.B., B.S., M.D., M.S.	Do.	U. Hong Kong.
ITALY—			
All Royal Italian Universities (*d*)	M.D.	Do.	
JAPAN—			
All Imperial Universities (*e*) ...	M.B. (Igakushi) M.D. (Igaku Hakushi)	Do.	
Any Government or Prefectural special colleges designated by a Minister of Education of Japan (*e*)	M.B. (Igakushi)	Do.	
MALTA—			
Royal University of Malta ...	M.D.	Do.	U. Malta.
NEWFOUNDLAND—			
Newfoundland Medical Board (*b*)	L.M.S.	Do.	Nfld. M. Bd.

THE SECOND SCHEDULE—*Contd.*

Other Countries	Title	Registrable qualifications	
		Nature of qualification as stated in diplomas	Abbreviations
1	2	3	4
NEW ZEALAND—			
University of New Zealand ...	M.B., Ch. B. Ch. M., M.D.	Do.	U. N. Zealand.
PAKISTAN—			
Punjab University	L.M.S. M.B. M.B., B.S. M.D. M.S.	Do.	U. West Punjab.
Punjab State Faculty	Medical L.M.S.	Licentiate in Medicine and Surgery.	L.M.S. Punjab. This qualification shall be a recognised one only when granted before the 15th August, 1947 provided the holders thereof had passed F.Sc. Examination before taking up medical studies.
UNION OF SOUTH AFRICA—			
University of South Africa (*b*) ...	M.B., Ch.B.	Do.	U. S. Africa.
University of Cape Town (*a*) (*c*)	M.B., Ch.B. M.D., Ch.M	Do.	W. Cape Town.
University of the Witwatersrand, Johannesburg (*a*) (*c*)	M.B., Ch.B. M.D., Ch.M.	Do. Do.	U. Witwatersrand.
STRAITS SETTLEMENTS AND FEDERATED MALAY STATES—			
The King Edward VII College of Medicine, Singapore (*a*) (*c*) ...	L.M.S.	Do.	Singapore Med. Coll.

(*a*) The qualification must be included in Table (F) of the British Medical Register as published from time to time by the General Medical Council of the United Kingdom.
(*b*) When granted on or before the 31st October, 1937.
(*c*) When granted on or before the 31st March, 1942.
(*d*) When granted on or before the 10th October, 1940.
(*e*) When granted on or before the 8th December, 1941.

THE THIRD SCHEDULE

(*See* section 13)

PART I

RECOGNISED MEDICAL QUALIFICATIONS GRANTED BY MEDICAL INSTITUTIONS NOT INCLUDED IN THE FIRST SCHEDULE FIRST SCHEDULE

Name of medical Institution or licensing authority	Recognised medical qualification	Abbreviation
College of Physicians and Surgeons of Bombay.	Licentiate of the College of Physicians and Surgeons, Bombay.	L.C.P.S. (Bom.)
State Medical Faculty, Bombay ...	Licensed Medical Practitioner.	L.M.P. (Bom.)
State Medical Faculty of Bengal ...	Licentiate of the Medical Faculty, Bengal.	L.M.F. (Bengal). This qualification shall be a recognised medical qualification only when granted before the 15th August, 1947.
	Licentiate in Medicine & Surgery (Nat.) (West Bengal).	L.M. & S. (Nat. West Bengal).

THE THIRD SCHEDULE—*Contd.*

Name of medical Institution or licensing authority	Recognised medical qualification	Abbreviation
State Medical Faculty of West Bengal.	Licentiate of the Medical Faculty, West Bengal.	L.M.F. (West Bengal).
	Licentiate in Medicine & Surgery (Nat.) West Bengal.	L.M. & S. (Nat.), West Bengal.
Government of Bengal	Licensed Medical Practitioner (Campbell Medical School).	L.M.P. (Campbell Medical School).
	Diploma of Medical College (Bengal).	Dipl. Medl. Coll. (Bengal).
	Licensed Medical Practitioner (Dacca Medical School).	L.M.P. (Dacca Medl. Sch.). This qualification shall be a recognised medical qualification only when granted before the 15th August, 1947.
State Medical Faculty of Uttar Pradesh.	Fellow of the State Medical Faculty (U.P.).	F.S.M.F. (U.P.).
	Member of the State Medical Faculty.	M.S.M.F (U.P.).
	Licentiate of the State Medical Faculty.	L.S.M.F. (U.P.).
State Board of Medical Examinations, U.P.	Licensed Medical Practitioner (U.P.).	
State Medical Faculty of Punjab ...	Fellow of the State Medical Faculty (Punjab).	F.S.M.F. (Punjab).
	Member of the State Medical Faculty (Punjab).	M.S.M.F. (Punjab).
	Licentiate of the State Medical Faculty.	L.S.M.F. (Punjab).
Government of Punjab	Licensed Medical Practitioner (Lahore).	M.P.L. (Lahore). This shall be a recognised medical qualification only when granted before the 15th August, 1947.
Hyderabad Government	Licentiate in Medicine and Surgery (Osmania).	L.M. & S. (Osmania).
	Licensed Medical Practitioner (Hyd.).	L.M.P. (Hyd.).
Government of Mysore	Licensed Medical Practitioner (Mysore)	L.M.P. (Mysore).
Mysore Medical School	Licensed Medical Practitioner (Mysore Medical School).	L.M.P. (Mysore Medl. Sch.).
Andhra University	Licentiate in Medicine and Surgery (Andhra U.).	L.M. & S. (Andhra U.).
Assam Medical Examination Board	Licensed Medical Practitioner (Assam).	L.M.P. (Assam).
	Licensed Medical Practitioner (B. W. Medical School, Dibrugarh).	L.M.P. (B. W. Medl. Sch. Dibrugarh).
Board of Examiners, Medical College, Madras.	Licensed Medical Practitioner (Madras).	L.M.P. (Madras).
	Diploma in Medicine and Surgery.	D.M.S. (Madras). Lic. Apoth. (Madras).
C.P. (or M.P.) Medical Examination Board.	Licensed Medical Practitioner (C.P. or M.P.).	L.M.P. (C.P. or M.P.).
Orissa Medical Examination Board.	Licensed Medical Practitioner (Orissa).	L.M.P. (Orissa)
Bihar and Orissa Medical Examination Board.	Licensed Medical Practitioner (Bihar and Orissa).	L.M.P. (Bihar and Orissa).
	Licensed Medical Practitioner, Temple Medical School, Patna).	L.M.P. (Temple Medl. Sch., Patna).
King Edward Hospital Medical School, Indore.	Diploma or certificate in Medicine and/or Surgery.	Diploma or certificate in Medicine and/or Surgery.
Travancore University	Do.	Do.
Rangoon University	Licentiate in Medicine and Surgery.	L.M. & S. (Rangoon U.). This qualification shall be a recognised medical qualification only when granted before the 1st April, 1937.
Burma Medical Examination Board.	Licensed Medical Practitioner.	L.M.P. (Burma). This qualification shall be a recognised medical qualification only when granted before the 1st April, 1937.

PART II

RECOGNISED MEDICAL QUALIFICATIONS GRANTED BY MEDICAL INSTITUTIONS OUTSIDE INDIA NOT INCLUDED IN THE SECOND SCHEDULE

M.D. (Berlin). M.D. (Paris). M.D. (Amsterdam). M.D. (Freiburg, Germany). M.D. (Vienna). M.D. (Toronto, Canada). M.D. (Heidelburg). M.B.B.S. (Dacca). M.D. (Bonn.) (Specialist for Women's Diseases and Obstetrics). M.B.B.S. (Ceylon). M.D. (Munich).

NOTES AND NEWS

Katherine Bishop Herman Prize

The Council of the British Medical Association is prepared to consider an award of the Katherine Bishop Harman Prize in the year 1957. The value of the prize is £75.

Any registered medical practitioner in (*a*) the British Commonwealth and Empire or the Republic of Ireland and (*b*) any member of the British Medical Association wherever resident is eligible to compete.

Preliminary notice of entry is required and a form for this purpose can be obtained from the Secretary. Entries must be forwarded so as to reach the Secretary, British Medical Association House, Tavistock Square, London, W.C. 1, not later than 31st December, 1956. Enquiries relative to the Prize should also be addressed to him.

Hastings and Hawthorne Clinical Prizes

The Sir Charles Hastings Clinical Prize Competition is established by the B.M.A. for the promotion of systematic observation, research and record in general practice. The competition has been extended by the addition of a second prize known as the Charles Oliver Hawthorne Clinical Prize. The Sir Charles Hastings Clinical Prize, consisting of a certificate and £75, will be awarded for the best entry. The Charles Oliver Hawthorne Clinical Prize, consisting of a certificate and £50, will be awarded for the second best entry. Any member of the Association who is engaged in general practice is eligible to compete for these prizes.

Essays, or whatever form the candidate desires his work to take, must be sent to the Secretary, British Medical Association, B.M.A. House, Tavistock Square, London, W.C. 1, not later than 31st December, 1956, to whom further enquiries relative to the prizes should be addressed.

Indian Public Health Association

Rajkumari Amrit Kaur, Union Minister for Health, inaugurating the Indian Public Health Association in Calcutta on 28 September, 1956, stressed the need for co-ordinating medical and public health activities at all levels.

She said that the need for balanced and co-ordinated progress in curative and preventive medicine made it incumbent on those concerned with them to devise ways to integrate closely the medical and public health machinery so that health work in the field might not suffer from compartmentalism and exclusiveness.

This was the problem that required urgent attention if the health programmes launched during the first Plan and those to be undertaken now, particularly the rural health centres scheme, were to yield results commensurate with the money and the effort being put into them.

She said: "To meet the challenge of this situation, there are, among other things, certain basic requirements that must be fulfilled. These are: a stock-taking of the current position in the light of historical and other factors concerning the evaluation of the situation as it obtains; the formulation of a plan of action taking into account the availability of resources and the estimated capacity to add to these in the course of the working of the plan; the gearing of the health machinery to a new tempo of work and the mobilisation of all available assistance, be it in the form of technical knowledge, trained manpower or plan and equipment; and the creation of "health consciousness" among the people and the arousing of their interest and enthusiasm in public health activities."

Pointing out that preventive medicine had a very important role to play in the furtherance of these objectives, she said: "Prevention of disease is for us not only the scientific and rational way of grappling with our health problems but also an inescapable expedient." There had been phenomenal progress in recent years in medicine leading to a better understanding of diseases. This had given rise to new concepts in the field of preventive medicine calling for a new orientation in the outlook not only of public health workers but also of the medical profession as a whole. "That is why I am determined to encourage departments of Social and Preventive Medicine in all medical colleges."

An exhibition was opened on this occasion at the premises of the All-India Institute of Hygiene and Public Health. It depicted through pictures, models, charts and diagrams activities of the Union and State Government's medical institutions and public health organisations.

One of the interesting sections related to environmental sanitation had a model of an ideal village home with a dug-well latrine, tube-well, a cheap incinerator made out of an empty drum, and a smokeless oven.

Other sections dealt with natural history of diseases and urban water supply plant and insecticides. Charts and diagrams explaining malaria and filaria control work were displayed.

Medical plants grown by the West Bengal Government at Rongo were on view. Use of radio isotopes in medicine, National Malaria Control and National Water Supply and sanitation programmes were explained by equipment, chart and diagram.

The World Health Organisation's activities and those under the Indo-American Co-operation Health and Sanitation Programme were explained through posters, charts and diagrams. The British Information Service displayed photographs and charts regarding child welfare in Britain. Sections were also opened dealing with the work of several medical institutions includ-

ing those of the Armed Forces Medical College at Poona, Calcutta Medical College and the Christian Medical College of Ludhiana. Specimens of spurious drugs and adulterated food were exhibited by the Calcutta Police.

Statistical machines to analyse public health data, such as births, deaths and marriages and the Public Health Institute's equipment for audiovisual aids in health education were also exhibited.

Sale of TB Seals

In common with the rest of India, the seventh TB seal sale campaign was inaugurated in West Bengal on 2-10-56. The campaign in this State is being conducted by the Bengal Tuberculosis Association the chairman of which, Dr. A. C. Ukil, explained its objectives at a press conference in Calcutta on 1-10-56.

He said it was more than a fund-raising campaign. It was a self-help drive for a national cause. It had been recognised throughout the world, that without the co-operation from the people, the tuberculosis problem of a country could not be solved.

He said that West Bengal collected about Rs. 3 lakhs during the first five seal campaigns and Calcutta accounted for about Rs. 2 lakhs. He hoped that with the co-operation of the officers of the Development Department of the Government at all levels, there would be greater response this time.

Giving an overall picture of the TB situation in the State Dr. Ukil said that in spite of the apparently diminishing number of deaths from tuberculosis, the incidence of clinical cases was on the increase. Official figures indicated that about 8,000 persons died of this last year, but it was difficult to ascertain the exact number of active cases.

The official figure for active cases in 1924 ran to about 63,000. Adding up the unrecorded cases presenting hardly any symptoms, it would perhaps be an underestimate to state that over 200,000 people were suffering from tuberculosis in West Bengal. It was hoped that the Government and public organisations would find a suitable method of ascertaining near-exact figures with regard to the morbidity and mortality from the disease.

For a thorough case-finding programme, there was nothing which could compare with the method of mass survey with miniature x-ray films. The recurring cost was much less and the demand on space for storing films was small. There was, therefore, no need to take an alarmist view regarding m.m.r. (mass miniature radiography).

The Health Department of the Government and voluntary organisations should prepare the field for these invevstigations by disseminating relevant information. Western countries had adopted the method of mass survey as one of the fundamentals in their control programme.

Pleading for the establishment of chest clinics, Dr. Ukil said these should have a direct link with the thana health centres. It would be appreciated if, in rural areas, there was one chest clinic for every 100,000 population. One chest clinic for each of the 53 sub-divisions of the 14 districts was needed without any further delay. Domiciliary treatment was considered as a corollary to the chest clinic service. The chest clinics would provide the cases and the number of domiciliary units would depend on that.

Through 10 affiliated chest clinics within Calcutta and 11 in the districts, the Bengal Tuberculosis Associated detected last year about 30,000 tuberculosis cases in about 52,000 patients. This was a fraction of the total number of tuberculosis patients in the State. Among the cases attending the clinics, about 25 per cent of the new patients had been found to be tuberculous.

Among the cases detected at the clinics, about 33 per cent lived in rural environments. Moreover, about 50 per cent of the patients diagnosed at city clinics had their permanent residence in the mofussil.

Value of Preventive Medicine

The Deputy Health Minister Mrs. M. Chandrasekhar who was opening the medical exhibition at the Andhra Medical College on 27 September 1956 said: "To my mind, clinical medicine cannot be divorced from social and preventive medicine. The study of diseases from patients while they are in the hospital wards will not constitute a complete study of medicine as a whole."

Patients would have to be studied in their social surroundings. This could be done not in the hospital wards but right in the homes where they lived, she added.

Mrs. Chandrasekhar hoped that the doctors and students working in the rural medical relief centre for running which the exhibition was being organised, would give adequate emphasis to preventive health care.

Such care had to be tackled both by personal and community approach, she said. While personal approach would be from the patient to the family and from the family to the community, the community approach would be related to tackling the problems of general public health like water supply, drainage and sanitation.

CORRESPONDENCE

The Editor is not responsible for the views expressed by correspondents

Indian Medical Council Bill 1956

SIR,—A Bill has been introduced in the Rajya Sabha called the Indian Medical Council Bill, 1956 (Bill No. VIII of 1956) and will very shortly come up for discussion. This bill repeals the Indian Medical Council Act 1956 and introduces new features for the reconstruction of the Medical Council of India and the maintenance of a Medical Council for India and for matters connected therewith. This being the case, it raises several issues for the full and immediate consideration of the members of the Indian Medical Association and the Medical profession in India.

The Sub-Committee appointed by the annual meeting of the Central Council of the Indian Medical Association

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at its meeting held in Lucknow suggested several amendments to Act No. XXVII of 1936 modified by Amendment Act IV of 1942 and prepared a Bill for that purpose. This proposed Bill was considered at the meeting of the Working Committee held in Calcutta in April, 1955, and was approved with certain amendments by the Working Committee.

The Union Government proposed about this time the formation of a Postgraduate Board for the purpose of taking over the supervision and regulation of post-graduate education in the country from the hands of the Medical Council of India. This action of the Central Government raised a very acute controversy in the medical world, but the Union Government proceeded with the idea and at the present moment the supervision and regulation of postgraduate education is in the hands of a Postgraduate Board.

It came to the knowledge of the Central Office of the Indian Medical Association that the Union Government were preparing a Bill for amending the Indian Medical Council Act. The matter was discussed at the Working Committee Meeting held in Calcutta on 7th and 8th April 1956 and several decisions were taken. It was also decided to approach the Ministry of Health in this connection placing before them the definite views of the Indian Medical Association before the bill was finalised. A deputation was appointed to attend upon the Union Health Minister to present the following points :

(*a*) *Common Register* : The Indian Medical Association has always taken the view that there should be only one Schedule and one Register for Graduates and Licentiates qualified in India. The Association feels that the time has now come when compartmentalism in the Medical Register should go and all qualified doctors be registered in one common register under only one schedule.

(*b*) *Representation of the Licentiates on the Medical Council of India* : Under the heading "Constitution and composition of the Council" of the proposed Amendment Act, the constituencies are rigid and water tight and that except under clause *f*, the Licentiates have no other representation on the Council. The Association is of the opinion that clause *c* and *f* should be combined since both these clauses refer to similar constituencies but with two significant differences. The first difference being that clause c refers to graduates only and clause *f* to licentiates only. The second and more important difference being that the graduates will have one member on the council from each state where a Medical Register is maintained, bringing their membership strength to about 20 or so, the licentiates are given only a total of 5 seats. One discrepancy in the delimitation of the constituencies under Clauses *c* and *f* needs to be given serious consideration. That whereas the graduate member will be elected on State basis, the licentiate member will have to seek election on all-India basis. It will be apparent that no other seat on the council has to be filled in on such a vast basis. A glaring injustice to the licentiates is again apparent in the same clause. A licentiate member cannot seek re-election. The injustice goes even further than that and not only the member is debarred from seeking re-election the State also is deprived of re-electing any person from its jurisdiction. The abovementioned suggestion of the Indian Medical Association to combine the clauses *c* and *f* will do away with all the defects in clause *f*. It is apparent from this suggestion that the strength of membership from each State maintaining a register will have to be increased and the Association urges upon the Government to increase the number of members to two with a proviso that at least one of them must be a graduate. This course apart from increasing the membership strength of the licentiates will also be conducive to better understanding between the two classes of medical men.

(*c*) *Clause 3(1) under the same heading as above* : The Association has no objection to the conditions contained in this clause, but it wishes to point out that as it stands, it provides for a reserved constituency for members of the Medical Faculties. Just as no outsider can stand from this constituency, it is but natural that those who are qualified to seek election from the Faculty seats should not be allowed to contest any other seat from any other constituency. In the proposed Amendment of the Act, the Faculty members have been given this unfair advantage.

(*d*) The Association feels that the Indian Medical Association being the largest medical organisation in the country, should have at least one seat on the Medical Council of India.

(*e*) The Indian Medical Association is also of the opinion that each State Medical Council should have a representative on the Medical Council of India. This is suggested in order to have a live contact between the State Medical Council and the Medical Council of India.

(*f*) The Indian Medical Association feels that those Indian nationals who possess basic foreign qualifications only, should also be given the franchise. This change is proposed because quite a large number of Indian nationals come under this category and there is no provision of franchise for them in the Amendment of the Act. It will be noted that we emphasise the words "Indian Nationals".

(*g*) Regarding Post-graduate Medical Association, the Indian Medical Association is of the view that to control this education, the best solution of the problem would be to create a special standing body of the Medical Council of India for this purpose and not a separate Council."

The Bill has now been introduced in the Rajya Sabha There are several points in the bill which require to be criticised from our stand-point :

1. (A) *Composition of the Indian Medical Council*— Clause 3 (1) defines the composition of the Council as follows :

(*a*) one member from each State to be nominated by the Central Government;

(*b*) one member from each University to be elected by the members of the medical faculty of that University from amongst themselves;

(*c*) one member from each State in which a State Medical Register is maintained to be elected from amongst themselves by persons enrolled on such Register who possess the medical qualifications included in the First or the Second Schedule or in Part II of the Third Schedule;

(*d*) seven members to be elected from amongst themselves by persons enrolled on any of the State Medical Registers who possess the medical qualifications included in Part I of the Third Schedule;

(*e*) six members to be nominated by the Central Government.

(B) Clause No. 3 also provides that pending preparation of the Indian Medical Register in accordance with the provisions of this Act, clause (*c*) shall have effect as if for the words "to be elected from amongst themselves by persons enrolled on such Register" the words "to be nominated by the State Government from amongst persons" had been substituted, and clause (*d*) shall have effect as if for the words "to be elected from amongst themselves by persons" the words "to be nominated by the Central Government from amongst persons" had been substituted. This is highly prejudicial to the vested interests of the elected old Council. It is very desirable and necessary that the old Council should continue till the elections are held after the preparation of the Indian Medical Register.

(2) There is no representation in the Council for the Indian Medical Association which is the accredited representative of the medical profession in our country. This omission should be rectified.

(3) It is open to Members of the Medical Faculty in the Universities in spite of the fact that they have a constituency of their own, to seek election from the constituencies (*c*) and (*d*). It should be laid down that such members who are competent to seek elections under 3 (1) (*b*) should opt for either the Medical Faculty constituency or any other constituency.

(4) Under clause 2 (*d*) it is laid down that the Central Government may constitute from amongst the members of the Council a Post-graduate Medical Education Committee which will consist of 9 members all of which shall be persons who possess Post-graduate Medical qualifications and experience of teaching and examining Post-graduate students of medicine. It is laid down under Clause 20 (3) that six of the members of the Post-graduate Education Committee shall be nominated by the Central Government and the remaining three members shall be elected from the Council from amongst its members. I cannot understand the necessity of nominating six members by the Central Government. It should be open for a highly representative body like the Medical Council of India to elect the nine members who will compose the Post-graduate Committee from amongst its members. If clause 20 (3) is allowed to remain as it is worded, it will enable six members of the Post-graduate Committee to enter the Committee by the back door of nomination by the Central Government.

(5) It has been the case of the Indian Medical Association that there should be one common Register with individual qualifications against each person. Under the Act it has been proposed to make (1) First Schedule consisting of persons holding recognized medical qualifications by Universities or medical institutions in India; (2) Second Schedule consisting of persons holding recognised medical qualifications by medical institutions outside India and (3) Third Schedule (Part I) consisting of persons holding recognised medical qualifications granted by medical institutions not included in the first schedule, and Part II consisting of persons holding registered medical qualifications granted by medical institutions outside India not included in the Second Schedule. By creating two separate first and third schedules the Union Government has sought to perpetuate compartmentalism in the medical profession the abolition of which the Union Government in the Ministry of Health has previously decided. I hope it is not too late to combine the First and Part I of the Third Schedule in one common schedule noting against each individual person his particular qualification for registration.

(6) It is proposed in the bill to call officers in charge of the Medical Council by the name of Chairman and Vice-Chairman. It would be more simple and correct to call them by the name of President and Vice-President.

(7) It is laid down that an appeal from a decision in the Medical Council of India shall lie with the Central Government. This is not only unfair and irregular but also harms the interests of the appellant. The Central Government cannot be the final adjudicators in medical matters. The appeal should lie either before the Supreme Court of India or a Special Appellate Board set up by the Medical Council of India. I stress this point with great emphasis because it involves a breach of fair play and justice in case of any appellant who has to appear before a higher tribunal.

(8) Lastly, I wish to point out that the draft Blill which has now been introduced before the Rajya Sabha and is likely to come up for discussion in the near future has not been sent for opinion to the representative body of the medical profession in our country, i.e., the Indian Medical Association. Not only that but I understand that the bill has not been referred to the old Medical Council before its introduction. It is necessary that the medical profession as a whole should take up this question without delay and direct a vigorous onslaught against the obnoxious provisions of this Bill. Time at our disposal is very short and the members of the Association should contact members of the Rajya Sabha and Lok Sabha in their respective provinces and place our viewpoints before them.

N.B. Since writing the above the Bill has come up for discussion before the Rajya Sabha on 1st August, 1956 and passed with some amendments. It will come up before the Lok Sabha later. I am etc.

Bombay. C. S. THAKAR.

REVIEWS

50 Jahre Arzneimittelforschung—Von Prof. Dr. C. L. Lautenschläger, Frankfurt/M.-Hoechst — Wuppertal-Elberfeld, 1955, VIII. 486 Seiten, Gr.-8°, Ganzleinen DM 36.—Georg Thieme Verlag, Stuttgart.
[*50 Years Drug Research* (in German)].

Fifty years ago the author started his career in an apothecary's shop, rising to become one of the leading pharmaceutical chemists, professor at various universities and a decisive agent in the growth of Germany's drug industry. The present survey deals with a multitude of subjects which all belong to the author's limitless sphere of active research.

He shows the main lines along which our knowledge of therapeutic drug effects grew, how drug synthesis based on fundamental sciences and biological assay methods developed, how improved ways of macro- and micro-analysis helped in the investigation and isolation of various important substances derived from natural products. Gradually, thanks to new biological methods, one came to realize the correlations between chemical structure, physical qualities and pharmacological effect. Looking beyond the limits of his subject, the author shows how beneficially modern drug technique acted on epidemiological and economic conditions and how much it improved morbidity and mortality statistics of epidemic and other diseases.

The vast material is arranged in 3 parts. The first (190 pp.) deals with means of prophylaxis and therapy of infectious diseases, especially immunological and chemotherapeutic preparations, including some for the treatment of malignant tumours. Part II (170 pp.) contains interesting information on biocatalysts; they are divided in natural hormones and synthetic preparations with hormone-like effects, and in organotherapeutic remedies such as the adenylic acid system, ferments, histaminase and hyaluronidase, vitamins, coagulants and anticoagulants, and flavones. Part III gives a concentrated survey of pharmacotherapeutic agents from anaesthetics, cardiovascular and diuretic preparations, antihistaminics, laxatives, alkaloids and many others upto radio-isotopes and plastics. Every chapter starts with an historical introduction and is followed by a fair number of references.

The most astonishing part of this impressive half-century pageant is that almost every chapter and every phase bears the mark of some of the author's lasting contributions.

Klinische Elektropathologie I. Kritische Sammlung elektropathologischer Gutachten aus interner Sicht—Von Dr. med. habil. S. Koeppen, Wolfsburg. II. Die Neurologie des elektrischen Unfalls und des Blitzschlags—Mit einem Kapitel über die elektromagnetischen Wellen und die Atomkräfte—Von. Prof. Dr. F. Panse, Bonn, 1955. XII, 424 Seiten, 60 teils mehrfarbige Abbildungen in 84 Einzeldarstellungen, Gr.-8°, Ganzleinen DM 33.—(Arbeit und Gesundheit, Heft 55). Georg Thieme Verlag, Stuttgart.
[*Clinical Electropathology* (in German).

I. Critical collection of expert electropathological evidences from the point of view of internal medicine by Dr. med. habil. S. Koeppen, Director, Medical Dept., Municipal Hospital, Wolfsburg.

II. Neurological Aspects of Accidents caused by Electricity and Lightning Shock with a chapter on electromagnetic waves and atomic forces by Prof. Dr. F. Panse, Director, Rhenish Clinic for the Brain Injured, Bonn. XII, 424 pp., 60 partly coloured illustr. in 84 figures. Georg Thieme, Stuttgart, 1955, DM 33].

The volume is the fiftyfifth of a series published by the West German Ministry of Labour and came about when the two authors offered the fruits of their wide and different experiences independently and simultaneously for publication. Stefan Jellineck, singlehanded, founded in Vienna at the beginning of this century the new science of electropathology which soon formed part of internal medicine and of neurology, of pathology and, especially, of forensic medicine. The authors of this book are foremost among his successors.

Koeppen published a monograph on "internal and nervous diseases after electric accidents" (2nd ed., Springer, 1953) so that his present contribution is a kind of commentary consisting mainly of histories of cases which became objects of medico-legal evidence. General and technical discussions are fóllowed by chapters on vegetative dystonia, ventricular fibrillation, myocardial infarction, essential hypertension, endo- and myocarditis, atherosclerosis, the problem of electrotraumatic damage in various diseases, spinal atrophy and cataract formation—all, of course, is claimed and often denied connection with the electric current. The large number of case reports, their analysis, the considerations how far the electric accident may be causally connected with the clinical condition, read like detective stories, although not one unnecessary word is to be found in the text which is full of intriguing facts and interesting photos. In his summary the author explains that his rather strict and expert evidences are based on years of experimental work and his experience that often far too high percentages of damages are medically certified, ignores the fact that in the majority of cases the electric current causes transient effects only.

II. Panse, who wrote a much quoted treatise on "injuries of the nervous system by technical electricity" as far back as 1930 (S. Karger), brings his subject fully upto date by discussing 125 cases in almost 300 pages, occasionally overlapping with the first part. A fully illustrated electrophysical chapter is followed by one on immediate manifestations after electric accidents and lightning shock. Discussions on cerebral oedema due to distant effects of peripheral electric currents on the brain, particularly detailed chapters on the author's special subject spinal atrophic after-effects including those with a progressive course, cerebral sequelae of lightning shock and technical electric injury, and electric burns of the skull give a very full picture of electroneurology.

The last 2 chapters bring the survey upto the atomic age by describing thermo-electric injuries of the spinal cord and peripheral nerves. Twenty-two closely printed pages of references in German, English, French, Italian,

and Spanish, reaching from 1875 to 1953, are proof of enormous amount of work which went into writing this book. To readers having a knowledge of German, it offers a wealth of information on many problems in which general practitioners and specialists of almost every subject are equally interested.

Life of Sir John Bland Sutton, Bt.—By W. R. Bett with foreword by Lord Webb-Johnson. Published, 1956, by E. & S. Livingstone Ltd., Edinburgh and London. Board bound, 9×6 inches, 100 pages; price 20s. net.

Born in 1855, Sir John Bland-Sutton had almost become a legendary figure and, with his demise in 1936, has left a name to conjure with, specially in connection with British gynaecological surgery. It is interesting to learn that although Bland-Sutton himself lived long enough to observe with gratification that hysterectomy for fibroids occupies an established position in surgery, Mathews Duncan had called him "a criminal mutilator of women", soon after his first subtotal hystectomy for fibroids in 1890. Bland-Sutton was the first to use the term *tubal mole* which perhaps is as familiar to a gynaecologist as a placenta is to a midwife. It is also interesting, now, to know that Bland-Sutton was elected to the council of the Royal College of Surgeons of England in 1910, in his sixth attempt, the five previous failures being due to his being attached to the Chelsea, a "Woman's Hospital". On learning about this, from his friend (now Lord) Webb-Johnson, Bland-Sutton resigned from Chelsea the next day and refused a consulting post. The book is full of many interesting and less well known episodes during the long life and busy career of this illustrious surgeon who was loved and admired by many and to whom patients came from all over the world. In the foreword, Lord Webb-Johnson has very rightly remarked about this life-sketch, "Those who knew Bland-Sutton will be grateful, and those who did not, will realize the greatness of his personality". This is a remarkable story of a remarkable man, and well worth a perusal.

The Biliary Tract—By Julian A. Sterling, M.D., F.A.C.S. Published in 1955 by The Williams and Wilkins Company. Available from Bailliere, Tindall and Cox, 7 & 8 Henrietta Street, Covent Garden, London W.C. 2. Board bound in cloth, 9½×6 inches, 424 pages with 94 illustrations, several in colour. Price 80s.

This is a book wherein we find that a good correlation has been brought about in clinical features, laboratory investigations, operative procedures and biliary tract functions, all of which lead towards a better understanding of the problems pertaining to diseases connected with the biliary tract, and thereby towards a better service to the sufferers, dispersed widely in the world. The author dispels confusion, quite often created by the vast number of existing theories and treatments for biliary tract diseases, by outlining in detail his choice of the methods which he has found most workable. Extensive bibliography at the end of each chapter will be helpful to those who want to pursue the study further. This neat volume will prove very useful to all concerned with biliary tract disease, specially to the gastro-enterologist, the general practitioner, the surgeon and the investigator.

Tuberculosis in the Commonwealth, 1955—NAPT.

This book records the transactions of the Fourth Commonwealth and Tuberculosis Conference held in London in June 1955. Nearly 1700 delegates from sixty countries including thirty-five in the British Commonwealth attended the conferences. The discussions were divided into sections including the preventive, clinical and social aspects of tuberculosis. There was also a discussion on Tuberculosis and Leprosy. As workers in special fields from many countries participated in the discussion, the record presents various view-points. It will be very useful to all tuberculosis workers, both medical and non-medical as a guide to the world opinion on various aspects of tuberculosis problem.

The Kasturba Medical College Magazine, Vol. 3, No. 2, June 1956. Mangalore. Editors: Drs. V. Iswariah and V. I. Itticheria. Pp. viii plus 116, 9¼×7¼ in.

The articles are good. "In Lighter Vein" is enjoyable. Abbreviations which have no sanction behind them are better avoided in a magazine primarily meant for the students. Another art plate for 10 halftone blocks would have brought out the details more clearly. Printing, binding, reproduction and general get-up are pleasing, and show the amount of attention devoted by the editors in its production.

Journal of the Stanley Medical College, Vol. XVI, No. 1. Paediatrics Number, November 1955. Madras. Editors: E. Theodore King and R. Gopalakrishnan. Pp. v plus 162, 9¼×7¼ in.

The article on Malaria Control is out of place in this number. Other articles for this special number are well chosen and informative. The editors are to be congratulated for this well produced magazine.

XXVI PUNJAB PROVINCIAL MEDICAL CONFERENCE, HOSHIARPUR

The 26th Punjab Provincial Medical Conference will be held on 1st and 2nd of December 1956 at Hoshiarpur. Members of the medical profession are requested to attend the Conference and send papers for the Scientific Section.

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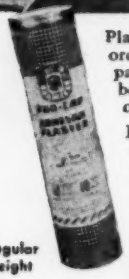

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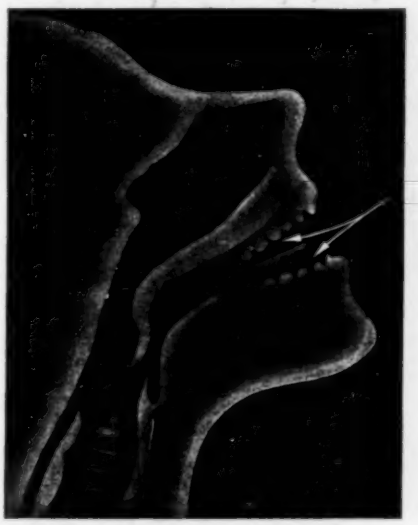

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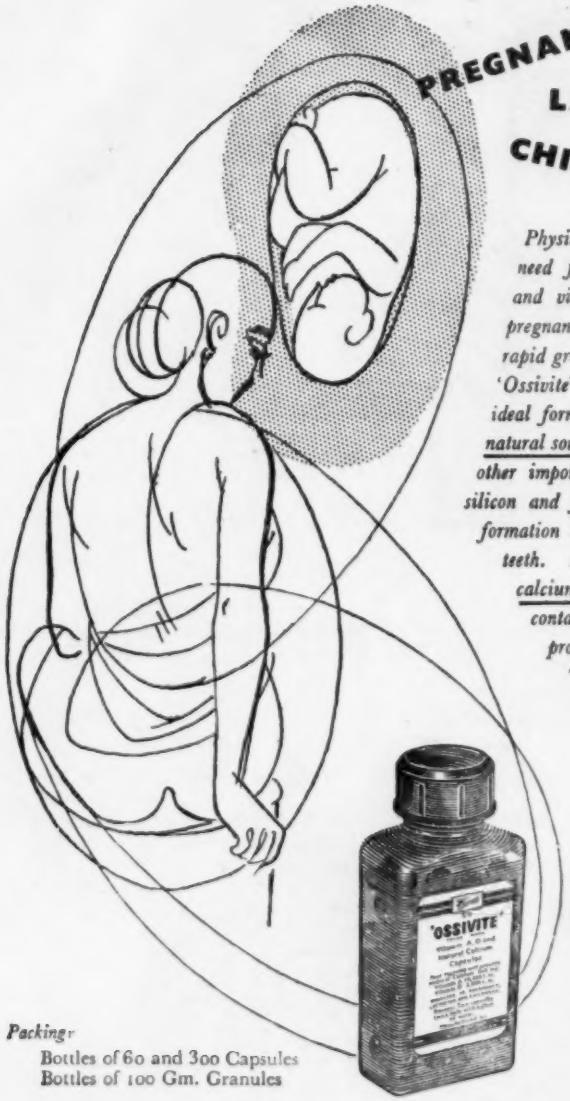

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